

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TENNESSEE
WESTERN DIVISION

WCM INDUSTRIES, INC.,)	
)	
Plaintiff,)	
)	
v.)	No. 2:13-cv-02019-JPM-tmp
)	
IPS CORPORATION, et al.,)	
)	
Defendants.)	

ORDER FOLLOWING CLAIM CONSTRUCTION HEARING

Before the Court is the parties' request for claim construction pursuant to Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995) (en banc).

I. BACKGROUND

A. Factual Background

Plaintiff WCM Industries, Inc. ("WCM") is a Colorado corporation with its principal place of business in Colorado. (Second Am. Compl. ¶ 1, ECF No. 75.) Defendant IPS Corporation ("IPS") is a Delaware corporation with its principal place of business in California. (Id. ¶ 2.) Defendant AB&A is a California corporation with its principal place of business in Tennessee. (Id. ¶ 3.) AB&A was acquired by IPS in August 2010. (Id. ¶ 5.) WCM alleges that one or more John Doe defendants, whose identities are presently unknown, have assisted, induced,

contributed, or cooperated with IPS, AB&A, or both to commit the acts complained of in the Complaint. (Id. ¶ 4.)

This case involves alleged infringement of the following utility patents on "overflow assemblies" (collectively, the "Utility Patents"):

U.S. Patent No.	Title of Invention	Issued
8,302,220 ('220 patent)	Method and Apparatus for Assembling and Sealing Bathtub Overflow and Waste Water Ports	Nov. 6, 2012
8,166,584 ('584 patent)	Overflow Assembly for Bathtubs and the Like	May 1, 2012
8,321,970 ('970 patent)	Method and Associated Apparatus for Assembling and Testing a Plumbing System	Dec. 4, 2012
8,505,132 ('132 patent)	Overflow Assembly for Bathtubs and the Like	Aug. 13, 2013
8,584,272 ('272 patent)	Method and Associated Apparatus for Assembling and Testing a Plumbing System	Nov. 19, 2013

(See ECF Nos. 75-1 to 75-4, 75-8.)

The following three design patents are also at issue (collectively, the "Design Patents"):

U.S. Patent No.	Title of Invention	Issued
D627,863 ('863 design patent)	Bathtub Overflow Pipe	Nov. 23, 2010
D636,468 ('468 design patent)	Flexible Bathtub Waste Pipe Assembly	Apr. 19, 2011
D665,062 ('062 design patent)	Bathtub Overflow Pipe	Aug. 7, 2012

(See ECF Nos. 75-5 to 75-7.)

The Court refers to the Utility Patents and the Design patents, collectively, as the "Asserted Patents."

B. Procedural History

On January 9, 2013, WCM filed a Complaint against all Defendants, asserting infringement of three utility patents - '220 patent, '584 patent, and '970 patent - and three design patents - '468 design patent, '863 design patent, and '062 design patent. (ECF No. 1.) On February 19, 2013, IPS filed its Answer and Counterclaim. (ECF No. 12.) On March 12, 2013, WCM filed its Reply to the Answer and Counterclaim. (ECF No. 14.)

On May 15, 2013, IPS filed a Motion to Consolidate Cases. (ECF No. 27.) On June 3, 2013, WCM filed its Response. (ECF No. 34.) On July 2, 2013, the Court entered an Order denying the Motion. (ECF No. 45.)

On May 16, 2013, the Court granted the IPS Motion to Amend its Answer and Counterclaim, and IPS filed its First Amended Answer and Counterclaim the same day. (ECF Nos. 29-30.) On May 30, 2013, WCM filed its Reply to Defendant's First Amended Answer and Counterclaim. (ECF No. 32.)

On July 26, 2013, the Court held a Patent Scheduling Conference, during which the parties presented the technology. (ECF No. 48.)

On August 19, 2013, IPS filed a Motion to Strike Portions of the Rebuttal Report of Michael Higgins. (ECF No. 54.) On September 5, 2013, WCM filed its Response in Opposition to IPS's Motion to Strike. (ECF No. 56.) On September 12, 2013, IPS filed a Motion for Leave to File Reply to IPS's Motion to Strike. (ECF No. 59.) On October 16, 2013, the Court entered an Order denying the Motions to Strike and an Order directing WCM to resubmit the rebuttal report. (ECF No. 66.) In the same order, the Court also denied the Motion for Leave to File a Reply. (Id.)

Also on August 19, 2013, WCM filed a Motion for Leave to File Amended Complaint, to add a count for infringement of U.S. Patent No. 8,505,132, entitled "Overflow assembly for bathtubs and the like," which issued on August 13, 2013. (ECF No. 53.) On September 3, 2013, IPS filed its Response in Opposition to the Motion for Leave to File Amended Complaint. (ECF No. 55.) On September 10, 2013, WCM filed a Motion for Leave to File Reply in Support of Motion for Leave to Amend Complaint. (ECF No. 57.) On September 11, 2013, WCM filed an Amended Motion for Leave to File Reply in Support of its Motion for Leave to Amend Complaint. (ECF No. 58.) On September 18, 2013, IPS filed its Response in Opposition to WCM's Motion for Leave to File Reply in Support of Motion for Leave to Amend Complaint. (ECF

No. 60.) On October 7, 2013, the Court entered an Order granting WCM's Motion for Leave to File an Amended Complaint, and finding as moot WCM's Motion for Leave to File a Reply and its Amended Motion for Leave to File a Reply. (ECF No. 64.) On October 8, 2013, WCM filed its First Amended Complaint. (ECF No. 65.) On October 22, 2013, IPS filed its Second Amended Answer and Counterclaim. (ECF No. 68.)

On October 21, 2013, WCM filed its unopposed Motion for Leave to File a Second Amended Complaint (ECF No. 67) to add the patent issuing from U.S. Patent Application No. 13/691,405, which the Court granted on October 22, 2013 (ECF No. 70). On October 22, 2013, IPS filed its unopposed Motion for Leave to Amend Its Answer and Counterclaim (ECF No. 69), which the Court denied as moot (ECF No. 74). On December 3, 2013, WCM filed its Second Amended Complaint. (ECF No. 75.) On December 17, 2013, IPS filed its Third Amended Answer and Counterclaim. (ECF No. 76.) On December 30, 2013, WCM filed its Reply to Defendant's Third Amended Answer and Counterclaim. (ECF No. 77.)

On October 4, 2013, the parties filed their respective Opening Claim Construction Briefs. (ECF Nos. 62, 63.) On January 31, 2014, the parties filed their respective Supplemental Claim Construction Briefs. (ECF Nos. 78, 79.) On

February 21, 2014, the parties filed their respective Responsive Claim Construction Briefs. (ECF Nos. 80, 81.) On February 28, 2014, the parties filed their Joint Claim Construction and Prehearing Statement. (ECF No. 83.) The Court held a claim construction hearing on March 10, 2014. (ECF No. 85.)

On July 11, 2014, WCM filed its Notice of Supplemental Authority Regarding Claim Construction, citing a recent decision by the United States Court of Appeals for the Federal Circuit ("the Federal Circuit") in the case of Hill-Rom Services, Inc. v. Stryker Corp., 755 F.3d 1367 (Fed. Cir. 2014). (ECF No. 87.) On July 14, 2014, IPS filed its Response to Plaintiff's Notice of Supplemental Authority Regarding Claim Construction, arguing that the Hill-Rom opinion does not introduce any new standard or change any previous ruling of the Court of Appeals. (ECF No. 88.)

II. CLAIM CONSTRUCTION STANDARD

"In conducting an infringement analysis, a court must first determine the meaning of any disputed claim terms and then compare the accused device to the claims as construed." Proveris Scientific Corp. v. Innovasystems, Inc., 739 F.3d 1367, 1371-72 (Fed. Cir. 2014) (citing Wavetronix LLC v. EIS Elec. Integrated Sys., 573 F.3d 1343, 1354 (Fed. Cir. 2009)); accord Markman, 52 F.3d at 976. Regarding the first step, "[c]laim

construction is an issue of law" for the district judge to determine. Arlington Indus., Inc. v. Bridgeport Fittings, Inc., 759 F.3d 1333, 1336 (Fed. Cir. July 17, 2014) (citing Lighting Ballast Control LLC v. Philips Elecs. N. Am. Corp., 744 F.3d 1272, 1276-77 (Fed. Cir. 2014) (en banc)).

A. Claims

1. General construction

"It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" Aventis Pharm. Inc. v. Amino Chems. Ltd., 715 F.3d 1363, 1373 (Fed. Cir. 2013) (quoting Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc)). Courts construe claim terms as having their "ordinary and customary meaning, as they would be understood by one of ordinary skill in the art in question at the time of the invention," unless the patent specification or prosecution history indicates a contrary meaning. 3M Innovative Props. Co. v. Tredegar Corp., 725 F.3d 1315, 1321 (Fed. Cir. 2013) (citing Phillips, 415 F.3d at 1312-13); accord Allergan, Inc. v. Apotex Inc., 754 F.3d 952, 957 (Fed. Cir. 2014). "There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of the claim term either in the

specification or during prosecution.” Golden Bridge Tech., Inc. v. Apple Inc., 758 F.3d 1362, 1365 (Fed. Cir. July 14, 2014) (quoting Thorner v. Sony Computer Entm’t Am. LLC, 669 F.3d 1362, 1365 (Fed. Cir. 2012)). “A determination that a claim term ‘needs no construction’ or has the ‘plain and ordinary meaning’ may be inadequate . . . when reliance on a term’s ‘ordinary’ meaning does not resolve the parties’ dispute.” O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co., Ltd., 521 F.3d 1351, 1361 (Fed. Cir. 2008).

“To determine the scope and meaning of a claim, we examine the claim language, written description, prosecution history, and any relevant extrinsic evidence.” InTouch Techs., Inc. v. VGO Commc’ns, Inc., 751 F.3d 1327, 1339 (Fed. Cir. 2014) (citing Phillips, 415 F.3d at 1315-19); Markman, 52 F.3d at 978-79.

Apart from the claim language itself, the specification is the single best guide to the meaning of a claim term. And while the prosecution history often lacks the clarity of the specification, it is another established source of intrinsic evidence. After considering these three sources of intrinsic evidence, a court may also seek guidance from extrinsic evidence. However, extrinsic evidence may be less reliable than the intrinsic evidence.

Vederi, LLC v. Google, Inc., 744 F.3d 1376, 1382 (Fed. Cir. 2014) (citations and internal quotation marks omitted).

Regarding the relationship of dependent claims to independent claims, there is a presumption under the doctrine of

claim differentiation that limitations found in dependent claims are not included in the independent claim. See GE Lighting Solutions, LLC v. AgiLight, Inc., 750 F.3d 1304, 1310 (Fed. Cir. 2014); Liebel-Flarsheim Co. v. Medrad, Inc., 358 F.3d 898, 910 (Fed. Cir. 2004). Claim differentiation, however, "is not a hard and fast rule, and the presumption can be overcome by a contrary construction required by the specification or prosecution history, such as via a disclaimer." Id.

2. Means-plus-function claim limitations

Section 112 of the Patent Act provides that claim limitations may be expressed as "means-plus-function" limitations:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112(f). The Federal Circuit has established two guidelines for determining whether § 112(f) applies to a given claim limitation. "[U]se of the word 'means' creates a rebuttable presumption that the drafter intended to invoke [§ 112(f)], while failure to use the word 'means' creates a rebuttable presumption that the drafter did not intend the claims to be governed by [§ 112(f)]." Flo Healthcare Solutions,

LLC v. Kappos, 697 F.3d 1367, 1373 (Fed. Cir. 2012) (citing Personalized Media Commc'ns LLC v. Int'l Trade Comm'n, 161 F.3d 696, 703-04 (Fed. Cir. 1998)). "These presumptions can be rebutted if the evidence intrinsic to the patent and any relevant extrinsic evidence so warrant." Personalized Media, 161 F.3d at 704.

Regarding the second guideline specifically, the presumption that § 112(f) does not apply because of the failure to use the word "means" "may be overcome if the claim fails to recite 'sufficiently definite structure' or merely recites a 'function without reciting sufficient structure for performing that function.'" Apple Inc. v. Motorola, Inc., 757 F.3d 1286, 1297 (Fed. Cir. 2014) (quoting Linear Tech. Corp. v. Impala Linear Corp., 379 F.3d 1311, 1319 (Fed. Cir. 2004)). The Federal Circuit has "repeatedly characterized this presumption as 'strong' and 'not readily overcome' and, as such, [has] 'seldom' held that a limitation without recitation of 'means' is a means-plus-function limitation." Id. (citing Lighting World, Inc. v. Birchwood Lighting, Inc., 382 F.3d 1354, 1358, 1362 (Fed. Cir. 2004); Inventio AG v. ThyssenKrupp Elevator Ams. Corp., 649 F.3d 1350, 1356 (Fed. Cir. 2011)).

"The correct inquiry is 'whether skilled artisans, after reading the patent, would conclude that a claim limitation is so

devoid of structure that the drafter constructively engaged in means-plus-function claiming.'" EnOcean GmbH v. Face Int'l Corp., 742 F.3d 955, 958 (Fed. Cir. 2014) (quoting Inventio, 649 F.3d at 1357 (Fed. Cir. 2011) (emphasis added)).

The overall means-plus-function analysis is a two-step process. Naturally, there is some analytical overlap between these two steps. In the first step, we must determine if the claim limitation is drafted in means-plus-function format. As part of this step, we must construe the claim limitation to decide if it connotes "sufficiently definite structure" to a person of ordinary skill in the art, which requires us to consider the specification (among other evidence). In the second step, if the limitation is in means-plus-function format, we must specifically review the specification for "corresponding structure." Thus, while these two "structure" inquiries are inherently related, they are distinct.

Apple Inc. v. Motorola, Inc., 757 F.3d at 1296.

B. Intrinsic Record

1. Specification

"The specification is fundamental to claim construction, as it is the single best guide to the meaning of a disputed term." Trading Techs. Int'l, Inc. v. Open E Cry, LLC, 728 F.3d 1309, 1319 (Fed. Cir. 2013) (quoting Phillips, 415 F.3d at 1315) (internal quotation marks omitted). In determining the meaning to be given to claim terms, a court must read the terms in the context of the specification as it is the patent specification which, by statute, must contain a "full, clear, concise, and exact" description of the invention. 35 U.S.C. § 112(a); accord

Phillips, 415 F.3d at 1311. As a result, "claim terms must be construed in light of the specification and prosecution history, and cannot be considered in isolation." GE Lighting Solutions, 750 F.3d at 1308-09 (citing Phillips, 415 F.3d at 1313).

The specification may use a claim term in a way that differs from its ordinary meaning; in such instances, the patentee is deemed to have acted as his own lexicographer and the ordinary meaning of the language must be rejected.

Allergan, 754 F.3d at 957. "Idiosyncratic language, highly technical terms, or terms coined by the inventor are best understood by reference to the specification." 3M Innovative Props., 725 F.3d at 1321 (citing Phillips, 415 F.3d at 1315-16). "To find a special definition mandated by the written description, a term must be 'clearly' redefined, and an 'express intent' to do so must be evident from the patent." Saffran v. Johnson & Johnson, 712 F.3d 549, 565-66 (Fed. Cir. 2013) (citing Elekta Instrument S.A. v. O.U.R. Scientific Int'l, Inc., 214 F.3d 1302, 1307 (Fed. Cir. 2000)), cert. denied, 134 S. Ct. 1023 (2014).

Although courts "read claims in view of the specification, of which they are a part, [courts] do not read limitations from the embodiments in the specification into the claims." Hill-Rom, 755 F.3d at 1371 (citing Liebel-Flarsheim, 358 F.3d at

904). The Federal Circuit has repeatedly cautioned against limiting the scope of a claim to the preferred embodiment or specific examples disclosed in the specification. See GE Lighting Solutions, 750 F.3d at 1309 (“[I]t is improper to read limitations from a preferred embodiment described in the specification – even if it is the only embodiment – into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” (alteration in original) (quoting Liebel-Flarsheim, 358 F.3d at 913)).

2. Prosecution History

“A court should also consider the patent’s prosecution history, if it is in evidence. The prosecution history consists of the complete record of the proceedings before the [U.S. Patent and Trademark Office].” InTouch Techs., 751 F.3d at 1341 (citations and internal quotation marks omitted).

“[P]rosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.” Plantronics, Inc. v. Aliph, Inc., 724 F.3d 1343, 1350 (Fed. Cir. 2013) (alteration in original) (quoting Phillips, 415 F.3d at 1317) (internal quotation marks omitted).

A court “does not rely on the prosecution history to construe

the meaning of the claim to be narrower than it would otherwise be unless a patentee limited or surrendered claim scope through a clear and unmistakable disavowal." 3M Innovative Props., 725 F.3d at 1322 (citing Trading Techs. Int'l, Inc. v. eSpeed, Inc., 595 F.3d 1340, 1352 (Fed. Cir. 2010)).

C. Extrinsic Evidence

"Although it is less significant than intrinsic evidence, a court can consider extrinsic evidence in the record, which 'consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.'" Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech., 709 F.3d 1348, 1355 (Fed. Cir. 2013) (quoting Phillips, 415 F.3d at 1317). Although such evidence is generally considered less reliable than the intrinsic record, the court is free to consider it and may do so at any stage of its inquiry. Lighting Ballast Control, 744 F.3d at 1304-05 (citing Phillips, 415 F.3d at 1319). "Courts may rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents." 3M Innovative Props., 725 F.3d at 1321.

III. ANALYSIS OF THE ASSERTED PATENTS

The Asserted Patents relate to bathtub waste pipe or overflow assemblies.

A. The Disputed Claims

The parties disagree about the proper construction of several claim terms found in the Utility Patents. The independent claims containing disputed language are as follows, with the dependent claims referenced and the contested language underlined:

1. The '220 Patent

Claim 1 is the first independent claim of the '220 patent, on which asserted claims 3, 5, and 6 depend.

1. An overflow assembly adapted for interconnection to a bathtub, which has a bottom, side walls, end walls, and an overflow port in one end wall, comprising:

- an overflow pipe with an elbow portion defining an upper end portion and a lower end portion, said upper end portion having an outer end defining an inlet and having threads on an outer surface thereof;
- a lip extending radially outwardly from said outer surface of the overflow pipe between said elbow portion and said upper end portion and being spaced from the inlet;
- a sealing element associated with said outer end that closes said inlet to fluid flow;
- a nut element with a threaded portion that is compatible with said threads associated with said inlet for mounting said nut element to said upper end portion, said nut element having a plurality of lugs extending radially from said nut element

wherein said nut element and said plurality of lugs constitute a single-piece unit; and
a cap detachably interconnected to at least one of said plurality of lugs and covering the nut.

('220 patent, col. 6, ll. 12-31, ECF No. 75-1 at PageID 2166.)

Claim 7 is the second independent claim of the '220 patent, on which asserted claim 9 depends:

7. An overflow assembly adapted for interconnection to a bathtub, which has a bottom, side walls, end walls, and an overflow port in one end wall, comprising:

- an overflow pipe with an elbow portion defining an upper end portion and a lower end portion, said upper end portion having an outer end defining an inlet, said upper end portion having threads on an outer surface thereof;
- a lip extending radially outwardly from said outer surface of the overflow pipe between said elbow portion and said upper end portion and being spaced from said inlet;
- a means for sealing associated with said outer end that closes said inlet to fluid flow;
- a nut element with a threaded portion that is compatible with said threads of said overflow pipe for threadingly mounting said nut element to said upper end portion, said nut element having a series of retention lugs spaced about a longitudinal axis defined by said nut element, wherein there is a gap between each retention lug; and
- a cap detachably interconnected to at least one of said series of retention lugs.

(Id. col. 6, ll. 46-65.)

Claim 12 is the third and last independent claim of the '220 patent, on which asserted claims 13, 14, and 16, depend:

12. An overflow assembly adapted for interconnection to a bathtub, which has a bottom, side walls, end

walls, and an overflow port in one end wall, comprising:

- an overflow pipe with an elbow portion defining an upper end portion and a lower end portion, said upper end portion having an outer end defining an inlet, said upper end having threads on an outer surface thereof;
- a lip extending radially outwardly from said outer surface of the overflow pipe between said elbow portion and said upper end portion and being spaced from said inlet;
- a nut element with a threaded portion that is compatible with said threads of said overflow pipe, said nut element having an outer periphery with a series of radially extending lugs that detachably engage an inner surface of a cap that fits over said nut.

(Id. col. 7, l. 8 - col. 8, l. 3.)

2. The '584 Patent

Claim 1 is the only independent claim of the '584 patent, on which asserted claims 3 and 4 depend:

1. An overflow assembly for a bathtub, which has a bottom and adjacent side and end walls, and an overflow port in an end wall, comprising:

- an overflow pipe with an elbow portion defining an upper end portion and a lower end portion, the upper end portion having an outer end defining an inlet;
- threads on an outer surface of the upper end portion and surrounding the inlet;
- a lip extending radially outwardly from an outer surface of the overflow pipe between the elbow portion and the upper end portion and being spaced from the inlet;
- a sealing element associated with said outer end that closes the inlet to fluid flow;
- a nut element compatible with the threads wherein the nut element has a threaded portion for threadably mounting to said upper end portion,

said nut element having at least one lug extending radially therefrom; and
a cap detachably associated to the lug and covering the nut.

('584 patent, col. 6, ll. 26-43, ECF No. 75-2 at

PageID 2183.)

3. The '970 Patent

Claim 1 is the first independent claim of the '970 patent,
on which asserted claims 2 and 4 depend:

1. A plumbing system for interconnection with a bathtub that has an overflow port and a drain port, comprising:

an overflow assembly that includes:

an overflow pipe with an elbow portion defining an upper end portion, which is adapted for interconnection with the overflow port, and a lower end portion, which is adapted for interconnection with a wastewater drain assembly, said upper end portion having an outer end defining an inlet, said upper end having threads on an outer surface thereof;

a lip extending radially outwardly from said outer surface of said overflow pipe between said elbow portion and said upper end portion and being spaced from said inlet;

a nut element with a threaded portion that is compatible with said threads of said overflow pipe, said nut element having an outer periphery with a series of radially extending lugs that detachably engage an inner surface of a cap that fits over said nut; and

a waste water insert for selective engagement with a strainer that is associated with the wastewater drain assembly.

('970 patent, col. 9, ll. 31-52, ECF No. 75-8 at

PageID 2289.)

Claim 6 is the second and last independent claim of the '970 patent, on which asserted claim 8 depends:

6. A plumbing system adapted for interconnection with a bathtub that has an overflow port and a drain port, comprising:

an overflow pipe with:

an elbow portion defining an upper end portion, which is adapted for interconnection to the overflow port, and a lower end portion, said upper end portion having an outer end defining an inlet and having threads on an outer surface thereof;

a lip extending radially outwardly from said outer surface of the overflow pipe between said elbow portion and said upper end portion and being spaced from the inlet;

a sealing element associated with said outer end that closes said inlet to fluid flow;

a nut element with a threaded portion that is compatible with said threads associated with said inlet for mounting said nut element to said upper end portion, said nut element having a plurality of lugs extending radially from said nut element wherein said nut element and said plurality of lugs constitute a single-piece unit;

a cap detachably interconnected to at least one of said plurality of lugs and covering said nut element; and

a wastewater drain assembly adapted for interconnection to the drain port and to the lower end portion of said overflow pipe, said drain assembly including a drain pipe having an upper end with an annular flange for resting on a bottom wall of the bathtub, and a means for locking slidably received by, and threadingly engaged, to said drain pipe, wherein tightening said means for locking against an outer surface of the bottom wall of the bathtub secures said wastewater drain assembly to the bathtub.

(Id. col. 10, ll. 12-42.)

4. The '132 Patent

Claim 1 is the first independent claim of the '132 patent, on which asserted claim 3 depends:

1. An overflow assembly for facilitating leak testing of a plumbing system that is adapted to be associated with a bathtub, comprising:

- an overflow pipe including an upper and a lower end;
an elbow between said upper end and said lower end,
said upper end having threads and being adapted to fit completely through an overflow port of the bathtub;
- a lip extending radially outwardly from an outer surface of the overflow pipe between said elbow and said upper end that is adapted to engage an outer surface of the bathtub adjacent to the overflow port;
- a nut element associated with said overflow pipe adapted to secure said overflow pipe to an end of the bathtub wherein a wall of the bathtub is positioned between said lip and said nut element, said nut element comprising threads compatible with said threads of said upper end and said nut element having a plurality of lugs extending radially from said nut element;
- a means for preventing fluid flow through said overflow pipe; and
- a cap selectively interconnected to said nut element.

('132 patent, col. 11, ll. 30-50, ECF No. 75-3 at PageID 2210.)

Claim 14 is the second independent claim of the '132 patent, on which asserted claims 15, 17, and 18 depend:

14. An overflow assembly for adapted for interconnection to a bathtub, which has a bottom, side walls, end walls, and an overflow port in one end wall, comprising:

- an overflow pipe having an elbow portion defining an upper end portion and a lower end portion, said upper end portion having an outer end defining an inlet and having threads on an outer surface thereof;
- a lip extending radially outwardly from said outer surface of said overflow pipe between said elbow portion and said upper end portion and being spaced from said inlet;
- an element associated with said outer end that closes said inlet to fluid flow;
- a nut element with a threaded portion that is compatible with said threads of said overflow pipe for mounting said nut element to said upper end portion, said nut element having a series of radially extending cap retention elements that are spaced about a longitudinal axis defined by said nut element, there being gaps between each of said radially extending cap retention elements; and
- a cap retained in a position of attachment to said radially extending cap retention elements, said radially extending cap retention elements being received within said cap.

(Id. col. 12, ll. 33-55.)

5. The '272 Patent

Claim 1 is the first independent claim of the '272 patent, on which asserted claims 2 through 10 depend:

1. A plumbing system for interconnection with a bathtub that has an overflow port and a drain port, comprising:

- an overflow assembly for interconnection with the overflow port, said overflow assembly comprising:
- an overflow pipe having a flange, said overflow port adapted to be associated with a threaded portion extending from said flange, said threaded portion adapted to pass through a wall of the bathtub and to be at least partially positioned within the bathtub;

- a means for preventing fluid flow through said overflow pipe that is associated with said threaded portion, said means for preventing fluid flow sealing an outer end of said threaded portion;
- a nut, having a threaded center opening, threadably mounted on said threaded portion of said overflow port, said nut being adapted to secure said flange to the wall of the bathtub by exerting pressure towards said flange; and said nut having an outer periphery with a series of radially extending cap retention elements which detachably engage an inner surface of a cap which fits over said nut; and
- a wastewater drain assembly for interconnection to the drain port.

('272 patent, col. 9, ll. 33-56, ECF No. 75-4 at
PageID 2243.)

Claim 11 is the second independent claim of the '272
patent:

11. A plumbing system for interconnection with a bathtub that has an overflow port and a drain port, comprising:

- an overflow assembly adapted for interconnection to a bathtub, which has a bottom, side walls, end walls, and the overflow port in one end wall, comprising:
 - an overflow pipe with an elbow portion defining an upper end portion and a lower end portion, said upper end portion having an outer end defining an inlet, said upper end having threads on an outer surface thereof;
 - a lip extending radially outwardly from said outer surface of the overflow pipe between said elbow portion and said upper end portion and being spaced from said inlet;
 - a device for affixing said overflow assembly to the bathtub sidewall having an internal, circular threaded surface, a nut body and radially extending cap retention elements, said

circular threaded surface being compatible with said threads of said overflow pipe, said radially extending cap retention elements adapted to engage an inner surface of a cap that fits over said device for affixing said overflow assembly to the bathtub sidewall; and
a wastewater drain assembly for interconnection to the drain port.

(Id. col. 10, ll. 17-40.)

Claim 12 is the third independent claim of the '272 patent:

12. A plumbing system for interconnection with a bathtub that has an overflow port and a drain port, comprising:

an overflow assembly for a bathtub, comprising:
an overflow pipe having a flange, the overflow port adapted to be associated with a threaded portion extending from said flange, said threaded portion adapted to pass through a wall of the bathtub and to be at least partially positioned within the bathtub;
a device for affixing said overflow assembly to the bathtub wall having an internal, circular threaded surface, a nut body and radially extending cap retention elements, said circular threaded surface being threadably mounted on said threaded portion of said overflow port, said device for affixing said overflow assembly to the bathtub sidewall being adapted to secure said flange to the wall of the bathtub by exerting pressure towards said flange; and said radially extending cap retention elements which are adapted to engage an inner surface of a cap which fits over said device for affixing said overflow assembly to the bathtub wall; and
a wastewater drain assembly for interconnection to the drain port.

(Id. col. 10, ll. 41-63.)

Claim 13 is the fourth and last independent claim of the
'272 patent:

13. A plumbing system for interconnection with a bathtub that has an overflow port and a drain port, the plumbing system also associated with a waste water strainer, said strainer having a cylindrical wall with a bottom edge surrounding a cylindrical opening extending through the bottom of the bathtub, and a flange extending outwardly from a level above and adjacent said cylindrical opening and positioned on the bottom of the bathtub, comprising:

an overflow assembly for a bathtub, comprising:

an overflow pipe having a flange, said overflow port adapted to be associated with a threaded portion extending from said flange, said threaded portion adapted to pass through a wall of the bathtub and to be at least partially positioned within the bathtub;

a device for affixing said overflow assembly to the bathtub wall having an internal, circular threaded surface, a nut body and radially extending cap retention elements, said circular threaded surface being threadably mounted on said threaded portion of said overflow pipe, said device for affixing said overflow assembly to the bathtub wall being adapted to secure said flange to the wall of the bathtub by exerting pressure towards said flange, and said radially extending cap retention elements being adapted to engage an inner surface of a cap which fits over said device for affixing said overflow assembly to the bathtub wall; and

a waste water insert adapted for insertion within the wastewater strainer and comprising a wall with a cylindrical portion having an upper end with a flange extending outwardly from said cylindrical portion, said flange having a downwardly-extending lip associated with the outer edge thereof, said lip adapted to engage an outer edge of the flange of the wastewater strainer, and wherein.

(Id. col. 10, l. 64 - col. 11, l. 31.)

B. Claim Terms Agreed Upon

In its Opening Brief, WCM noted that it stipulated to IPS's proposed construction of the terms "drain port" and "overflow port," as provided in IPS's Final Claim Construction Statement. (ECF No. 62 at 7 n.5; Ex. 11 at 10, ECF No. 62-12 at PageID 1225.) The Court acknowledges these constructions, as they may provide useful and relevant context. Accordingly, the Court ADOPTS the construction of "drain port" to mean "an opening in the bathtub that receives the wastewater assembly," and "overflow port" to mean "opening in the bathtub that receives the upper portion of the overflow assembly."

C. The Disputed Terms

The Court will address the disputed terms in turn, which are grouped as relevant.

1. "Sealing element," "element associated with said outer end," "means for preventing fluid flow," and "means for sealing"

WCM argues that a "sealing element" means a "seal having a surface around and in secure engagement with an inlet." (ECF No. 62 at 7.) WCM contends that there were several sealing elements known in the art and that "sealing element" is not limited to an integrally fixed diaphragm. (Id. at 8.) WCM, therefore, opposes this term being construed as a means-plus-function claim limitation. (Id. at 7-8.) WCM further asserts

that it intended "sealing element" to have a broader meaning than the one IPS proposes. (Id. at 9.) WCM cites to several parts of the specifications for the '220 patent, '584 patent, and '970 patent in support of its contention that "sealing element" encompasses different structures for sealing a fitting. (Id. at 9-10.)

IPS argues that the Asserted Patents use the three claim terms - "sealing element," "means for preventing fluid flow," and "means for sealing" - interchangeably and without differentiation. (ECF No. 63 at 7.) IPS also asserts that these terms are properly construed as means-plus-function limitations, which "all express the function, - 'that closes said inlet to fluid flow,' - without reciting a structure." (Id.) According to IPS, because these terms are means-plus-function limitations, these claim terms are narrowly limited to the structures identified in the written descriptions of the Asserted Patents. (Id. at 5, 8-11.) Thus, IPS proposes constructions that contemplate a sealing element consisting of a thin diaphragm that is removed by cutting or breaking. (Id. at 8-11.)

The Court will first address the meaning of "sealing element" and "element associated with said outer end", and then

will address the construction of "means for preventing fluid flow" and "means for sealing."

a) "Sealing element" and "element associated with said outer end"

The Court agrees with WCM that these terms are not means-plus-function claim limitations. Failure to use the word "means" creates a rebuttable presumption that the drafter did not intend the claim to be governed by § 112(f). See Flo Healthcare Solutions, 697 F.3d at 1373. The burden of overcoming this presumption falls on the party asserting a means-plus-function construction. See Inventio, 649 F.3d at 1360.

The fact that a disputed term "is defined in functional terms is not sufficient to convert a claim element containing that term into a 'means for performing a specified function' within the meaning of" § 112(f). Greenberg v. Ethicon Endo-Surgery, Inc., 91 F.3d 1580, 1583 (Fed. Cir. 1996). The determination of whether a term indicates a means-plus-function claim limitation, like the construction of any claim, depends on "the words of the claims themselves, the written description, the prosecution history, and any relevant extrinsic evidence." Inventio, 649 F.3d at 1357.

"Ultimately, whether claim language invokes § 112, ¶ [f] depends on how those skilled in the art would understand the

structural significance of that claim language, assessed against the presumptions that flow from a drafter's choice to employ or not employ the term 'means.'" Inventio, 649 F.3d at 1360 (citing Personalized Media, 161 F.3d at 704). All that must be shown to avoid invoking § 112(f) is "that the claim term be used in common parlance or by ordinarily skilled artisans to designate sufficiently definite structure, 'even if the term covers a broad class of structures.'" Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 711 F.3d 1348, 1365 (Fed. Cir. 2013) cert. denied, 134 S. Ct. 900 (U.S. 2014) (quoting Lighting World, 382 F.3d at 1359-60).

WCM argues that the claims and specification provide evidence of sufficient structure to avoid a means-plus-function construction. (ECF No. 81 at 9-10.) IPS contends that the only structure disclosed is the sole embodiment of the invention and that "sealing element" has no structural meaning to one of ordinary skill in the art. (ECF No. 63 at 7-8.) The Court will address intrinsic and extrinsic evidence separately.

(1) Intrinsic evidence

The Court finds ample evidence of structure associated with "sealing element" in the claims and specifications of the Asserted Patents. In Phillips, the Federal Circuit found the term "baffles" to fall outside the scope of § 112(f) despite

performing several functions in the claimed invention. 415 F.3d at 1311. In determining that the term was "not a purely functional placeholder in which structure is filled by the specification," the Court of Appeals looked to the physical location of the baffles, which according to the claim language "'extend[ed] inwardly' from the steel shell walls." Id.

Similar to the claims asserted in Phillips, all of the independent claims in the Asserted Patents in the instant case that include the term "sealing element" limit the physical structure of the "sealing element" to a particular physical location. Specifically, the Asserted Patents limit the "sealing element" to the "outer end" of the overflow inlet. (See e.g., '220 patent, col. 6, ll. 15-23, ECF No. 75-1 at PageID 2166; '584 patent, col. 6, ll. 29-38, ECF No. 75-2 at PageID 2183; '970 patent, col. 10, ll. 14-25, ECF No. 75-8 at PageID 2289.)

In addition to this significant physical limitation, the Court finds a substantial number of other structural elements associated with "sealing element" in each of the patents. In the '220 patent specification, for example, the patentee discloses thin diaphragms, which may consist of a variety of materials. (See, e.g., '220 patent figs. 4-5, item 80; col. 2, ll. 39-40; col. 3, ll. 49-55; col. 3, ll. 56-58; col. 4, ll. 64-66 (describing that the overflow pipe is "plugged by the

diaphragm").) Moreover, dependent claim 4 contemplates that the "sealing element is a diaphragm that is adapted to be selectively cut." ('220 patent, col. 6, ll. 27-39, ECF No. 75-1 at PageID 2166.) Dependent claim 6 contemplates a further structural limitation that the sealing element "is removable." (Id., col. 6, ll. 43-45.)

As to the '584 patent, the patentee discusses sealing elements such as a balloon or "some sort of seal plate" in the context of existing practice. (See, e.g., '584 patent, col. 1, ll. 37-39, 45-48, ECF No. 75-2 at PageID 2181 (background of the invention).) The specification contemplates that the diaphragm is a "thin circular plate disk." (Id. col. 3, ll. 53-55.) The patentee also depicts other embodiments of the '584 patent in Figures 14a, 14b, and 15, which show a removable seal "that may be selectively inserted or removed from the overflow assembly," and its diameter is substantially congruent to the diameter of the overflow valve. (Id. col. 5, ll. 44-46, 58-61.) The removable seal does not require a knife or other tool to cut out, and it is contemplated in one embodiment that a pull ring may be used to remove the seal. (Id. col. 5, ll. 46-54, 62-65; col. 6, ll. 1-2.) In another embodiment, the seal may be formed in a slot that is formed in the retainer nut and may be removed

or inserted at the discretion of the user. (Id. col. 6, ll. 3-4, 7-10.)

Dependent claims in the '584 patent also provide structure. Claim 6 adds the limitation: "wherein said sealing element is an overflow plate." (Id. col. 6, ll. 54-55.) Claims 8, 9, and 10 contemplate other kinds of sealing elements, namely a diaphragm with a pull ring that is either slidingly or peelably interconnected to the overflow pipe. (Id. col. 6, ll. 58-63.)

The '970 patent indicates that the overflow assembly has "an obstructed end that prevents the flow of fluid" and states that "a related aspect of the present invention [is] to selectively block fluid flow through the overflow assembly," by using the "closed portion of the cylindrical fitting [which] acts as a plug" and "may be cut, or otherwise removed." ('970 patent, col. 2, ll. 40-41, 55-60, ECF No. 75-8 at PageID 2285.) The specification also discusses at least three different embodiments for a test cap, which is used "to plug the overflow port." (Id. col. 7, ll. 65-67; figs. 17-18 (first embodiment), figs. 19-20 (second embodiment), figs. 21-23 (third embodiment); see also col. 7, l. 64 - col. 8, l. 32.) The specification further contemplates the use of a test cap to plug or obstruct the overflow port for testing: "[I]f testing needs

to be performed subsequent to removal of a diaphragm, a test cap 176 can be used." (Id. col. 8, ll. 2-4.)

The claims of the '970 patent themselves provide evidence of structure. Dependent claim 9 adds the limitation that the "sealing element is a diaphragm," which implies that the "sealing element" of claim 6 is not limited necessarily to a diaphragm. (Id. col. 10, ll. 48-49.)

Regarding the term "element associated with said outer ring" in the '132 patent, dependent claim 16 describes a structure, where "said overflow pipe and said element associated with said outer end comprises a one-piece construction." ('132 patent, col. 12, ll. 57-60, ECF No. 75-3 at PageID 2210.) Dependent claims 19 and 20 further contemplate a structure where the element is a diaphragm "adapted to be selectively cut to provide a fluid flow path through said overflow pipe." (Id. col. 12, l. 66 - col. 13, l. 3.)

Furthermore, the language of the '132 patent specification contemplates several structures for sealing the overflow port for testing. One embodiment disclosed in the '132 patent is the use of a cylindrical fitting with a "thin plastic diaphragm 64 sealed across its outer end," which can be "frictionally inserted" into the sleeve of the overflow drain pipe. (Id. col. 5, ll. 24-30.) Another is a "thin circular plate disk" that can

be "integrally formed" with the overflow pipe fitting or connected to the fitting by "fusing, hermetically sealing, or by otherwise rigidly attaching" the disk to the fitting. (Id. col. 5, ll. 52-63; col. 9, ll. 1-11 (further describing the seal as a "circular membrane").) Likewise, the specification contemplates that the seal may be in the form of a "removable seal" that can be "selectively inserted or removed from the overflow assembly." (Id. col. 5, ll. 45-56; figs. 14a, 14b, 15.) The removable seal may have a "pull ring" for easy removal (id. col. 7, l. 64 - col. 8, l. 2; fig. 14b), or it may be "modified to extend outwardly from the outer most surface of the threaded portion" of the overflow assembly (id. col. 8, ll. 2-10; fig. 15).

IPS cites to a single case where a term lacking the word "means" was construed under § 112(f). In Mas-Hamilton Group v. LaGard, Inc., the Federal Circuit found that if § 112(f) was not applied to the construction, the term "'moving element' could be any device that can cause the lever to move." 156 F.3d 1206, 1214 (Fed. Cir. 1998). Unlike the claims asserted in Mas-Hamilton, the claims and specifications of the Asserted Patents in the present case do not contemplate an unlimited meaning for the term "sealing element." For one, the claims physically limit the sealing element to the "outer end" of the overflow inlet. (See, e.g., '220 patent, col. 6, 15-23, ECF No. 75-1 at

PageID 2166.) Second, in its claim construction briefs, IPS itself points to several of the above-mentioned structures disclosed in the Asserted Patents. (ECF No. 63 9-10.) All of these embodiments seal the outer end of the overflow inlet and attach to the outside of the overflow assembly. Thus, the Court finds ample intrinsic evidence of structure related to "sealing element" and "element associated with said outer end" to avoid construction under 35 U.S.C. § 112(f).

(2) Extrinsic evidence

In determining the structural significance of a claim term, it is also appropriate to consider extrinsic evidence such as expert testimony and dictionary definitions. EnOcean, 742 F.3d at 959-60; see also Inventio, 649 F.3d at 1356.

IPS provides substantial extrinsic evidence that the term "sealing element" lacks structure. When asked what the term "sealing element" means, IPS's expert James Robert Paschal responded, "[I]t really did not have a specific meaning, and certainly nothing specialized towards the plumbing industry." (ECF No. 89 at PageID 3876, ll. 20-24.) Further, when inquired what would happen if a plumber was asked for a "sealing element," Paschal responded, "I would expect that he would either ask me you [sic] for a lot more clarification on what you

mean by sealing element or perhaps offer you a gasket or an O-ring" (Id. at PageID 3877, ll. 2-6.)

Moreover, WCM's own expert failed to articulate any significant structure related to the term "sealing element." During the Claim Construction Hearing, WCM's expert William T. Ball testified that when questioned during his deposition on whether the terms "sealing" and "element" used together had "any particular meaning . . . as any particular device or structure," Ball responded that "[t]he claim refers to the envision of the sealing outlet as a means for preventing fluid flow." (ECF No. 89 PageID 3814, ll. 9-20.) Ball went on to explain that he did not use the word "means" in a legal sense. (ECF No. 89 PageID 3814, l. 20 - PageID 3815 l. 3.) Instead, Ball intended that the term "sealing element" was "a sealing object that prevents fluid flow." (ECF No. 89 PageID 3814, ll. 23-24.) Ball further characterized "sealing element" as "an element or a sealing piece that stops the fluid flow." (ECF No. 89 PageID 3815, ll. 2-3.)

Although Ball may not have intended to use the word "means" to indicate a means-plus-function construction of "sealing element," Ball's use of the terms "object", "element", and "piece" do little to provide structure to the term "sealing element" beyond a "means for preventing fluid flow." See

Personalized Media, 161 F.3d at 704-05 (characterizing the terms "means," "element," and "device" as generic structural terms). Nowhere does Ball indicate a particular structure associated with the term "sealing element."

Additionally, WCM has provided two expert reports authored by Higgins. In these reports, Higgins offers his opinion on the construction of the term "element" including construction of the term "sealing element." (ECF 79-10 at 36-45.) Higgins asserts that he is a person of ordinary skill in the relevant art and proposes that "sealing element" should be interpreted as "a seal having a surface around and in secure engagement with an inlet." (ECF No. 62-11 at 4, 16.) Higgins bases his construction on many of the structures previously mentioned. (See id. at 16-18; ECF No. 79-9 at 43-45.) Although Higgins redefines the term "sealing element" based on the claims and specifications of the Asserted Patents, Higgins does not go so far as to explain how one of ordinary skill in the art would use the term "to designate sufficiently definite structure." See Power Integrations, 711 F.3d at 1365.

In EnOcean, the Federal Circuit based its decision to exclude the term "receiver" from § 112(f) in part because the party opposing the means-plus-function construction provided "extensive" extrinsic evidence that "receiver" conveyed known

structure to one of ordinary skill in the art including scientific literature and expert declarations. 742 F.3d at 959-60. In the instant case, WCM's expert declarations are not so strong as to conclusively rebut IPS's proffered extrinsic evidence.

Despite the extrinsic evidence provided by IPS, it is the intrinsic evidence of the Asserted Patents that is afforded greater weight. See Phillips, 415 F.3d at 1317 ("[Extrinsic evidence] is less significant than the intrinsic record in determining the legally operative meaning of claim language.") (internal quotation marks omitted). Ample intrinsic evidence of physical structure exists to support the presumption against applying a means-plus-function construction to the term "sealing element." See supra Part III.C.1.a.1. The "sealing element" disclosed in the Asserted Patents could not be any 'object' that "closes [the overflow] inlet to fluid flow." (See ECF No. 89 at PageID 3814, ll. 23-24.; '220 patent, col. 6, 15-23, ECF No. 75-1 at PageID 2166.) Association with the outer end alone is likely sufficient to avoid § 112(f). See CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1369-70 (Fed. Cir. 2002) (finding that the term "member" had sufficient structure to avoid § 112(f), where the claims described the "member" as having "a 'rear support and a front end' with one end of this

structure circulating around a crankshaft and the other having wheels so that it can "rollably engage the base portion" of the claimed invention"). For example, the clear language of the claims excludes an object placed within the inlet to prevent fluid flow because that object would not be "associated with [the] outer end." ('220 patent, col. 6, 15-23, ECF No. 75-1 at PageID 2166.) Additionally, the written descriptions in the Asserted Patents provide numerous embodiments associated with the "sealing element." See supra Part III.C.1.a.1. Like the Inventio case, "this is not a case where a claim nakedly recites [an 'element'] and the written description fails to place clear structural limitations on the ['element']." 649 F.3d at 1359.

Accordingly, the Court finds that the terms "sealing element" and "element associated with said outer end" do not invoke a means-plus-function construction under 35 U.S.C. § 112(f).

(3) Scope

WCM interprets "sealing element" as "a seal having a surface around and in secure engagement with an inlet." (ECF No. 62 at 9-10.) WCM cites to several parts of the specifications for the '220 patent, '584 patent, and '970 patent in support of its contention that "sealing element" encompasses different structures for sealing a fitting. (Id. at 9-10.) WCM

further asserts that the prosecution history of the patent should not limit the term's scope because there was no "clear and unmistakable disavowal of scope during prosecution." (ECF No. 81 at 5-6.)

IPS, on the other hand, argues that the construction should be limited to a sealing element consisting of a thin diaphragm that is removed by cutting or breaking. (ECF No. 63 at 8-11.) IPS further argues that the '220 patent disclosed only an integral structure that was removed by cutting or breaking and that any subsequent embodiments are new material. (Id. at 8.) Regarding use of a test cap as a potential sealing element as disclosed in the '970 patent, IPS argues that the specification actually teaches away from the use of such test caps. (ECF No. 80 at 8.) "Plugs and/or caps are easily misplaced, and are often difficult to install, thereby increasing the time and difficulty of testing a plumbing system." ('970 patent, col. 2, ll. 7-12, ECF No. 75-8 at PageID 2285.) In light of this teaching, IPS asserts, the test caps disclosed in the '970 patent are explicitly distinguished from existing test caps, in that the claimed test caps are only to be used "if further testing is required." (ECF No. 80 at 8-9 (quoting '970 patent, col. 8, ll. 5-32, ECF No. 75-8 at PageID 2288).) Additionally,

"the diaphragm of the test cap of this embodiment of the present invention may be cut away to provide an opening. . . ." (Id.)

IPS also points to several statements by the patentee made during prosecution of the patent in support of a narrow construction. IPS asserts that during prosecution, WCM distinguished the invention from U.S. Patent No. 5,890,241 ("Ball"), by arguing "that the port 28 can be plugged in any convenient manner. . . . Ball does not teach sealing a thin diaphragm over the waste water port." (ECF No. 63 at 8 (citing ECF No. 63-13 at 8).) IPS further argues that WCM disclaimed certain scope of the term "sealing element" by distinguishing the current invention from U.S. Pat. No. 6,618,875 ("Oropallo"). IPS highlights a reply to an office action, where WCM argues that "Oropallo does not disclose the limitation in amended independent claim 3 requiring 'a thin sealing membrane that covers the inner surface of the outer face to seal the cap against the end of the horizontal leg.'" (ECF No. 80 at 10 (quoting ECF No. 80-1 at 63-64).) IPS points to another prosecution document, where WCM distinguishes the current invention from the Oropallo test cap by asserting:

Oropallo does not disclose a cap having an inner surface that is composed entirely of material that possesses malleable characteristics sufficient to seal an overflow pipe when the cap is securely threaded to the overflow pipe. In contrast, Oropallo relies on an o-ring to create a sealed connection when installed.

(Id. (quoting ECF No. 80-1 at 95-96).) IPS argues WCM further distinguished the cap disclosed in Oropallo as a "solid test cap" in contrast to the thin sealing membrane disclosed in the present invention. (Id. at 12 (quoting ECF No. 80-3 at 19-20).)

(a) Claims and Specification

A patent's claims define the invention, Aventis, 715 F.3d at 1373, and are to be construed in light of the specification, Inventio, 649 F.3d at 1356.

In the instant case, both the claims themselves and the specifications of the Asserted Patents help form the contours of the term "sealing element." The claim language of the independent claims in the Asserted Patents discloses an important limitation that the "sealing element" must be associated with the outer end of the overflow inlet. See supra Part III.C.1.a.1.

The dependent claims also shed light on the scope of the meaning of "sealing element." Under the doctrine of claim differentiation, independent claims are attributed a broader scope than the dependent claims because to do otherwise would render the dependent claims redundant. See Phillips, 415 F.3d at 1324. Therefore, it would be improper to read limitations

disclosed in the dependent claims into the construction of an independent claim. See GE Lighting Solutions, 750 F.3d at 1310.

In the '220 patent, Claim 4 depends on Claim 1 and contemplates that the "sealing element is a diaphragm that is adapted to be selectively cut." ('220 patent, col. 6, ll. 27-39, ECF No. 75-1 at PageID 2166.) This claim language creates a presumption that the limitation of a diaphragm that can be cut away is not read into the construction of "sealing element." The presumption to exclude this limitation from the construction is supported by dependent Claim 6, which expresses that the sealing element "is removable," rather than "selectively cut." (Id. col. 6, ll. 43-45.) Accordingly, the Court finds that the '220 patent contemplates structures that are not strictly limited to a thin diaphragm or one that must be cut away or broken, as IPS proposes.

As to the '584 patent, claim 6 depends on the system of claim 1 and adds the limitation: "wherein said sealing element is an overflow plate." Dependent claim 6 thus implies that the system of Claim 1 can use an overflow plate - not just a diaphragm - as a sealing element. ('584 patent, col. 6, ll. 54-55, ECF No. 75-2 at PageID 2183.) Claims 8, 9, and 10 depend on Claim 1 and also contemplate other kinds of sealing elements, namely a diaphragm with a pull ring that is either slidingly or

pealably interconnected to the overflow pipe. (Id. col. 6, ll. 58-63.) Accordingly, the Court finds that the claims of the '584 patent contemplate other kinds of sealing elements.

As to the '584 patent specification, multiple embodiments of the "sealing element" are disclosed. The specification contemplates that the diaphragm is a "thin circular plate disk." (Id. col. 3, ll. 53-55.) Further, figures 14a, 14b, and 15 contemplate several different embodiments of the "sealing element." These figures show a removable seal "that may be selectively inserted or removed from the overflow assembly," and its diameter substantially congruent to the diameter of the overflow valve. (Id. col. 5, ll. 44-46, 58-61.) The removable seal does not require a knife or other tool to cut out, and it is contemplated in one embodiment that a pull ring may be used to remove the seal. (Id. col. 5, ll. 46-54, 62-65, col. 6, ll. 1-2.) In another embodiment, the seal may be formed in a slot in the retainer nut and may be removed or inserted at the discretion of the user. (Id. col. 6, ll. 3-4, 7-10.) Accordingly, the Court finds that the '584 patent contemplates a wider variety of structures than IPS's definition allows.

Similar to the claims of the other Asserted Patents, dependent claim 9 of the '970 patent contemplates the "sealing element" as a "diaphragm." ('970 patent, col. 10, ll. 48-49,

ECF No. 75-8 at PageID 2289.) This language implies that the "sealing element" expressed in independent claim 6, upon which claim 9 depends, is not limited to a diaphragm.

The '970 patent specification also contemplates a broader understanding for "sealing element" than that proposed by IPS. The '970 patent indicates that the overflow assembly has "an obstructed end that prevents the flow of fluid" and states that "a related aspect of the present invention [is] to selectively block fluid flow through the overflow assembly," by using the "closed portion of the cylindrical fitting [which] acts as a plug" and "may be cut, or otherwise removed." ('970 patent, col. 2, ll. 40-41, 55-60, ECF No. 75-8 at PageID 2285.) The specification discusses at least three different embodiments for a test cap, which is used "to plug the overflow port." (Id. col. 7, ll. 65-67; figs. 17-18 (first embodiment), figs. 19-20 (second embodiment), figs. 21-23 (third embodiment); see also id. col. 7, l. 64 - col. 8, l. 32.) The specification also discloses use of a test cap to plug or obstruct the overflow port for testing: "[I]f testing needs to be performed subsequent to removal of a diaphragm, a test cap 176 can be used." (Id. col. 8, ll. 2-4.)

In regards to the term "element associated with said outer end," the dependent claims enlighten the proper scope of the

term. Claim 16 depends on independent claim 14 and describes a structure, where "said overflow pipe and said element associated with said outer end comprises a one-piece construction." ('132 patent, col. 12, ll. 57-60, ECF No. 75-3 at PageID 2210.) Thus, a one-piece limitation should not be read onto the term "element associated with said outer end." Further, dependent claims 19 and 20 contemplate a diaphragm "adapted to be selectively cut to provide a fluid flow path through said overflow pipe." (Id. col. 12, l. 66 - col. 13, l. 3.) Therefore, proper construction should not include the limitation of a diaphragm that is cut away.

The language of the '132 patent specification also contemplates a broad understanding of sealing structure. The purpose of the invention is to "safeguard the overflow system during construction" and "to provide an overflow fitting which will prepare the overflow system for testing." ('132 patent, col. 3, ll. 28-32, ECF No. 75-3 at PageID 2206.) Another structure used for sealing the overflow port is the use of a cylindrical fitting with a "thin plastic diaphragm 64 sealed across its outer end," which can be "frictionally inserted" into the sleeve of the overflow drain pipe. (Id. col. 5, ll. 24-30.) The specification goes on to explain that the "thin circular plate disk" can be "integrally formed" with the overflow pipe

fitting or it can be connected to the fitting by "fusing, hermetically sealing, or by otherwise rigidly attaching" to the fitting. (Id. col. 5, ll. 52-63; col. 9, ll. 1-11 (describing the seal as a "circular membrane").) Likewise, the specification contemplates that the seal may be in the form of a "removable seal" that can be "selectively inserted or removed from the overflow assembly." (Id. col. 5, ll. 45-56; figs. 14a, 14b, 15.) The removable seal may have a "pull ring" for easy removal (id. col. 7, l. 64 - col. 8, l. 2; fig. 14b), or it may be "modified to extend outwardly from the outer most surface of the threaded portion" of the overflow assembly (id. col. 8, ll. 2-10; fig. 15).

Accordingly, the Court finds that the claims and specifications do not support IPS's narrow construction of the terms "sealing element" and "element associated with said outer end that closes said inlet to fluid flow."

(b) Prosecution Disclaimer

"[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." Phillips, 415 F.3d at 1317. "The doctrine of prosecution disclaimer is well established in

Supreme Court precedent, precluding patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution." Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1323 (Fed. Cir. 2003) (citing Schriber-Schroth Co. v. Cleveland Trust Co., 311 U.S. 211, 220-21 (1940) ("It is a rule of patent construction consistently observed that a claim in a patent as allowed must be read and interpreted with reference to claims that have been cancelled or rejected, and the claims allowed cannot by construction be read to cover what was thus eliminated from the patent.")). The doctrine of prosecution history estoppel differs from prosecution disclaimer in that prosecution history estoppel limits the doctrine of equivalents, whereas prosecution disclaimer applies to literal infringement and claim construction. AccuScan, Inc. v. Xerox Corp., 76 F. App'x 290, 292 (Fed. Cir. 2003) (citing Omega, 334 F.3d at 1323-26).

Under the doctrine of prosecution disclaimer, "'clear and unmistakable' disavowal during prosecution overcomes the 'heavy presumption' that claim terms carry their full ordinary and customary meaning." Biogen Idec, Inc. v. GlaxoSmithKline LLC, 713 F.3d 1090, 1094-95 (Fed. Cir. 2013) (quoting Omega, 334 F.3d at 1323, 1326) (citing Epistar Corp. v. Int'l Trade Comm'n, 566 F.3d 1321, 1334 (Fed.Cir.2009)). "[W]here found, prosecution history disclaimer can overcome the presumption of claim

differentiation.” Biogen, 713 F.3d at 1097 (citing Regents of Univ. of Cal. v. Dakocytomation Cal., Inc., 517 F.3d 1364, 1375-76 (Fed.Cir.2008)). Disavowal can occur through either amendment of the claims or through representations and arguments made to the examiners. Biogen, 713 F.3d at 1095.

IPS asserts that WCM disavowed claim scope and limited the “sealing element” to a thin diaphragm in an Appeal Brief during the prosecution of the ‘220 patent. (ECF No. 63 at 8 (citing ECF No. 63-13 at 8).) In the Appeal Brief, WCM argues “that the port 28 can be plugged in any convenient manner. . . . Ball does not teach sealing a thin diaphragm over the waste water port.” (Id.) IPS’s reliance on WCM’s statement is misplaced. First, the claim at issue in the Appeal Brief was a method claim and did not include the term “sealing element.” (ECF No. 63-13 at 2.) Instead, the claim at issue specifically included the term thin diaphragm. (Id.) Thus, WCM was correct in asserting that the thin diaphragm distinguished that claim from the prior art.

Second, WCM went on to explain that the references cited by the examiner did not render the claim at issue obvious because combined they taught a plug within the drain, not on the overflow port. (Id. at 9.) Given the separate grounds for avoiding obviousness and the differences in terminology between the claim at issue in the Appeal Brief and the claims of the

Asserted Patents, the Court finds that WCM did not make a "clear and unmistakable disavowal" of claim scope in the Appeal Brief. See Biogen, 713 F.3d at 1094-95.

Contrary to IPS's position, the prosecution history generally supports a broad interpretation of the term "sealing element." For example, the 2007 Amendment and Response to Patent Application No. 10/674,862, which gave rise to the '970, '584, '132, and '272 patents, contemplated a "closure member" or "closure device" that is used to seal the overflow assembly. (ECF No. 62-4 at PageID 1108-09, 1111-14.)

IPS's assertion that WCM disclaimed the sealing structures disclosed in Oropallo, however, has merit. In distinguishing the present invention from the disclosures in Oropallo, WCM argued:

[I]t can be seen that the items of Oropallo capable of "sealing and closing" the plumbing line 11 requires both a pressure test cap 40 as well as the annular seal 42 carried by that cap 40 of Oropallo. The annular seal 42 sets in a groove of the inner surface of the cap and projects outwardly therefrom. Thus, Oropallo does not teach a cap having an uninterrupted flat planar inner surface and therefore, Applicant respectfully submits that Oropallo does not anticipate the Applicant's claim 1.

(ECF No. 80-1 at PageID 3335.) In a later Amendment and Response, WCM again distinguished its claims from those of Oropallo based on the o-ring employed in the Oropallo cap. (Id.

at PageID 3367.) WCM asserted that "Oropallo does not disclose a cap having an inner surface that is composed entirely of material that possesses malleable characteristics sufficient to seal an overflow pipe when the cap is securely threaded to the overflow pipe." (Id.) Finally, in a later Amendment, WCM again stresses the fact that Oropallo does not teach a "cap having an open ended circular planar end, with a thin sealing membrane secured to the cap and extending over the opening in the circular planar end." (ECF No. 41 at PageID 3422.) WCM goes on to explain that Oropallo teaches a solid cap, which unlike the thin sealing membrane, cannot "be cut to allow for pressure testing once the overflow assembly is assembled." (Id. at PageID 3422-23.)

The Court finds that WCM has clearly and unmistakably disavowed claim scope in order to avoid the structures disclosed in the Oropallo reference. This finding, however, does not narrow the scope to the extent proposed by IPS, which would limit "sealing element" to a single embodiment disclosed in the '220 patent. Rather, the Court finds that WCM has disavowed the critical structure of the Oropallo reference, namely, the o-ring/annular seal set in a groove of the inner surface of the cap.

A construction exclusive of an o-ring/annular seal set in a groove of the inner surface of the cap is supported by the claims and specifications of the Asserted Patents. Not once did WCM include a similar structure in the specifications of the Asserted Patents. Considering both the intrinsic and extrinsic evidence, the Court finds that "sealing element" and "element associated with said outer end" necessarily exclude an o-ring/annular seal set in a groove of the inner surface of the cap. Accordingly, the Court construes "sealing element" and "element associated with said outer end" as "a seal having a surface around and in secure engagement with an inlet, and lacking an o-ring or annular seal set in a groove of the inner surface of the cap."

b) "Means for preventing fluid flow" and "means for sealing"

The first step of the means-plus-function analysis requires the Court to "determine if the claim limitation is drafted in means-plus-function format." As for the claim limitations "means for preventing fluid flow" and "means for sealing," the Court finds that use of the word "means" creates a rebuttable presumption that the drafter intended the claim to be governed by 35 U.S.C. § 112(f). See Flo Healthcare Solutions, 697 F.3d at 1373. The parties do not dispute that these limitations invoke § 112(f). (ECF No. 81 at 24.) Accordingly, the Court

finds that the limitations "means for preventing fluid flow" and "means for sealing" are means-plus-function limitations.

Once the Court has determined means-plus-function applies, the Court first identifies the function of the limitation, and second identifies the corresponding structure in the specification to construe the limitation. Biomedino, LLC v. Waters Techs. Corp., 490 F.3d 946, 950 (Fed. Cir. 2007). In determining the function for a means-plus-function limitation, it is generally improper to read unclaimed limitations into the function. See JYW Enterprises, Inc. v. Interact Accessories, Inc., 424 F.3d 1324, 1330-31 (Fed. Cir. 2005). Therefore, "a court may not construe a means-plus-function limitation 'by adopting a function different from that explicitly recited in the claim.'" Id. (quoting Micro Chem., Inc. v. Great Plains Chem. Co., 194 F.3d 1250, 1258 (Fed. Cir. 1999)). "[A] court errs by importing the functions of a working device into the specific claims, rather than reading the claims for their meaning independent of any working embodiment." Id. (internal alterations, quotation marks, and citations omitted).

In identifying corresponding structure, the Court's construction must account for "all structure in the specification corresponding to the claimed function." Callicrate v. Wadsworth Mfg., Inc., 427 F.3d 1361, 1369 (Fed.

Cir. 2005). "Under section 112, paragraph [f], structure disclosed in the specification is 'corresponding' structure 'only if the specification or the prosecution history clearly links or associates that structure to the function recited in the claim.'" Northrop Grumman Corp. v. Intel Corp., 325 F.3d 1346, 1352 (Fed. Cir. 2003) (quoting B. Braun Med., Inc. v. Abbott Labs., 124 F.3d 1419, 1424 (Fed. Cir. 1997)).

Consequently, "[a] court may not import into the claim features that are unnecessary to perform the claimed function." Id.

"Features that do not perform the recited function do not constitute corresponding structure and thus do not serve as claim limitations." Id.

Proper means-plus-function construction also includes equivalents of the corresponding structure. 35 U.S.C. § 112(f); see Callicrate, 427 F.3d at 1369 (defining the term "cutting means" as "pivotally mounted cutting mechanisms, slidably mounted cutting mechanisms, hand-held scissors, hand-held razors, and, of course, equivalents of these structures" based on the embodiments disclosed in the patent specification) (emphasis added). In construing a means-plus-function limitation, it may be appropriate for the construction to render dependent claims redundant if the claimed structure exists in an embodiment disclosed in the specification. Mollhagen v. Witte,

18 F. App'x 846, 849-50 (Fed. Cir. 2001) ("[T]he stringencies of a means-plus-function limitation cannot be avoided by merely adding a dependent claim that recites the corresponding structure disclosed in the specification.") (citing Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1538 (Fed. Cir. 1991)).

WCM argues that the corresponding structure is "a thin-walled apparatus that may be placed in a manner to seal the inlet." (ECF No. 62 at 23-24.) In its supplemental brief, WCM asserts that this same construction applies to the '272 patent. (ECF No. 79 at 22.) WCM argues that the claim term itself discloses the function, which is to "close[] the inlet to fluid flow." (ECF No. 81 at 24 ("[T]he term 'seal' that is the root of the word 'sealing' in 'means for sealing' is generally understood to mean a device that closes the inlet to fluid flow.")) WCM further argues that IPS "has cited to only some of the many structures actually described in the patents-in-suit for performing this function." (Id.)

IPS argues that the '220 patent identifies only a single structure for the function expressed by the claim terms, "a thin diaphragm that is integrally formed with the overflow assembly or that is permanently sealed to the overflow assembly that is removed by cutting or breaking." (ECF No. 63 at 6, 8.) IPS also contends that the '584 patent identifies three structures,

claiming "thin diaphragm[s]." (Id. at 6, 9-10.) As for the '970 patent, IPS asserts that the specification identifies four structures: a "thin diaphragm" and three kinds of test cap. (Id. at 6, 10-11.) Regarding the '132 patent, IPS maintains that the corresponding structure is a "thin diaphragm." (ECF No. 78 at 4-7.) In its rebuttal brief, IPS argues that the structures in the '584, '970, '132, and '272 patents, "all still contain some version of the thin, breakable diaphragm originally disclosed in the '724 Application." (ECF No. 80 at 17.)

Both parties' constructions contain flaws. While WCM's construction is too broad for a means-plus-function limitation, IPS's construction fails to recognize several embodiments disclosed in the specifications of the Asserted Patents.

The following claims employ either "means for preventing fluid flow" or "means for sealing": claims 7, 8, 10, 16 and 17 of the '220 patent; claims 2 and 3 of the '970 patent; claims 1, 2, 4-6, 8-13, and 22-25 of the '132 patent; and claims 1-3 and 5-10 of the '272 patent.¹ In the present case, the Court finds the limitations "means for preventing fluid flow" and "means for sealing" have the function to seal the overflow inlet to fluid

¹ The Court notes that claim 13 of the '132 patent and claim 10 of the '272 patent omit the words "means for" in the phrase "said preventing fluid flow." The Court interprets the omission as a typo and construes the limitation as "said means for preventing fluid flow."

flow. (See '220 patent, col. 6, ll. 56-57, col. 8, l. 15, ECF No. 75-1 at PageID 2166-67; '132 patent, col. 11, ll. 48-49, 62-65, col. 13, l. 20, ECF No. 75-3 at PageID 2210, 2211; '970 patent, col. 10, ll. 2-3, ECF No. 75-8 at PageID 2289; col. 9., ll. 44-45, ECF No. 75-4 at PageID 2243.) Having determined the function, the Court construes the limitations "means for preventing fluid" and "means for sealing" according to the corresponding structure disclosed in each individual patent and equivalents thereof.

(1) The '220 patent

The '220 patent specification teaches use of a thin diaphragm that is a "circular membrane" "integrally formed" with or "hermetically sealed to the outer end of the overflow [inlet]." (Id. col. 3, ll. 49-56.) "The diaphragm 80 may be composed of plastic material, flexible rubber, or the like," such that it is "easily punctured or easily removable." (Id. col. 3, ll. 56-57.) This embodiment also contemplates that the diaphragm will be cut by a knife or other sharp object by the plumber after testing for leaks. (Id. col. 5, ll. 4-10.) The '132 and '970 patents disclose a similar embodiment. ('132 patent, col. 6, ll. 20-30, col. 7, ll. 4-10, col. 9, ll. 1-11, col. 10, 27-32, ECF No. 75-3 at PageID 2207-09; '970 patent, col. 6, ll. 31-35, 50-51, 61-63, ECF No. 75-8 at PageID 2287.)

For the '220 patent, the Court finds the structure corresponding to the means-plus-function limitations includes "a thin circular diaphragm that is integrally formed with or hermetically sealed to the outer end of the overflow pipe." The Court declines to include the limitation that the diaphragm is "removed by cutting or breaking" as proposed by IPS. Because cutting or breaking is not necessary to the function of sealing the overflow inlet to fluid flow, inclusion of that limitation in the corresponding structure would be improper. See Northrop Grumman, 325 F.3d at 1352. Furthermore, IPS's proposed limitation that the diaphragm is permanently sealed to the overflow assembly is not found in the language of the claims or specification.

(2) The '132 patent

The specification of the '132 patent describes an alternate embodiment of the thin diaphragm as "a thin circular plate disk" "of plastic material" "integrally formed with fitting 58" forming "one unitary component." ('132 patent, col. 5, ll. 52-57 ECF No. 75-3 at PageID 2207.) In another embodiment, the "thin circular plate disc" is "connected [to the overflow drain pipe fitting] by fusing, hermetically sealing, or by otherwise rigidly attaching by its outer peripheral edge to the rearward

outer peripheral edges of the fitting 58 by a suitable adhesive." (Id. col. 5, ll. 58-62.)

The '132 patent discloses a separate embodiment that is an overflow plate. The overflow plate is made up of a recessed portion and a rim with a lip that "engages a notched surface 124 on at least a portion of the retainer nut." (Id. col. 7, ll. 15-23.) In an alternate version of the overflow plate, the notched surface is "located nearly concentrically about the thickness of the retainer nut" and the overflow plate "is held in place by engaging both sides of the retainer nut 114 surrounding the notched surface 124." (Id. col. 7, ll. 34-43.)

In yet another embodiment, the structure is a removable seal. The removable seal "may be selectively inserted or removed from the overflow assembly to prevent or permit water to flow through the overflow assembly 130." (Id. col. 7, ll. 45-49.) In this embodiment, the seal is inserted into and removed from "a slot 144 formed in the threaded portion 134 of the overflow assembly 130." (Id. col. 7, ll. 50-52.) Unlike other embodiments, cutting the seal is not required. (Id. col. 7, ll. 52-56.) In one version of this embodiment, the seal has "a pull ring 148, which extends outside the slot 144 formed in the threaded portion 134 of the overflow assembly 130" for ease of removal. (Id. col. 7, l. 65 - col. 8, l. 2.) A similar

embodiment discloses the same structure, except that the slot is "formed in the retainer nut," rather than the threaded portion of the assembly. (Id. col. 8, ll. 3-10.)

The claim language of the '132 patent does not include the phrase "means for sealing." Therefore, with regards to the '132 patent, the Court's construction applies only to the limitation "means for preventing fluid flow." Further, because the written description of the '132 patent discloses corresponding structure substantially similar to the thin diaphragm disclosed in the '220 patent, the Court incorporates by reference the Court's construction of "means for preventing fluid flow" in the '220 patent.

In addition to the thin diaphragm disclosed in the '220 patent, the Court finds that corresponding structure in the '132 patent includes "a thin circular plate disk of plastic material that forms one unitary component with the overflow pipe fitting." The Court finds that corresponding structure further includes "a thin circular plate disk fused, hermetically sealed or otherwise rigidly attached to the overflow pipe fitting." Also included in the corresponding structure is "an overflow plate that slides vertically into position between the surface of the tub and the retainer nut, and has a rim and a lip that engages a notched surface on the retainer nut." In an alternate

embodiment of the overflow plate, the corresponding structure includes "a notched surface that is nearly concentric about the thickness of the retainer nut such that the lip engages both sides of the retainer nut surrounding the notched surface as illustrated in Figure 13." The Court finds that corresponding structure in the '132 patent further encompasses "a removable seal that is inserted into a slot formed in either the retainer nut or threaded portion of the overflow assembly."

(3) The '970 and '272 patents

The '970 and '272 patents disclose a test cap embodiment for use in subsequent testing. ('970 patent, col. 8, ll. 2-4, ECF No. 75-8 at PageID 2288; '272 Patent, col. 8, ll. 2-4, ECF No. 75-4 at PageID 2242.) The test cap has a cylindrical body and a flange. ('970 patent, col. 8, ll. 6-7, ECF No. 75-8 at PageID 2288; '272 patent, col. 8, ll. 6-7, ECF No. 75-4 at PageID 2242.) "The flange 184 has a face 188 that receives a diaphragm 54 and includes internally located threads 192 that receive the threads of the cylindrical fitting 42 of the overflow assembly 2. . . ." ('970 patent, col. 8, ll. 7-11, ECF No. 75-8 at PageID 2288; '272 patent, col. 8, ll. 7-11, ECF No. 75-4 at PageID 2242.) Similar to other embodiments, the diaphragm is cut away after testing is complete. ('970 patent,

col. 8, ll. 13-16, ECF No. 75-8 at PageID 2288; '272 patent, col. 8, ll. 13-16, ECF No. 75-4 at PageID 2242.)

A different test cap is disclosed later in the '970 and '272 patents. This test cap has "an inner surface 196 of malleable material that helps seal the interconnection of the test cap 176 and the overflow elbow 18." ('970 patent, col. 8, ll. 23-26, ECF No. 75-8 at PageID 2288; '272 patent, col. 8, ll. 23-26, ECF No. 75-4 at PageID 2242.) This test cap interconnects with the external threads of the overflow assembly such that "the end of the overflow assembly 2 will deform the inner surface of the test cap 176 somewhat to create a seal." ('970 patent, col. 8, ll. 26-29, ECF No. 75-8 at PageID 2288; '272 patent, col. 8, ll. 26-29, ECF No. 75-4 at PageID 2242.) Another version of this test cap includes a diaphragm that can be cut away. ('970 patent, col. 8, ll. 29-32, ECF No. 75-8 at PageID 2288; '272 patent, col. 8, ll. 29-32, ECF No. 75-4 at PageID 2242.)

The '970 and '272 patents also disclose a plug with a diaphragm on one end that "may be cut away to provide an opening." ('970 patent, col. 8, ll. 17-22, ECF No. 75-8 at PageID 2288; '272 patent, col. 8, ll. 17-22, ECF No. 75-4 at PageID 2242.)

The claims of the '970 patent do not contain the phrase "means for sealing." Therefore, with regards to the '970 patent, the Court construes only the limitation "means for preventing fluid flow." Because the '970 patent discloses an embodiment substantially similar to the diaphragm disclosed in the '220 patent, the Court incorporates by reference the Court's construction of "means for preventing fluid flow" in the '220 patent.

The Court finds that corresponding structure in the '970 patent includes "a test cap with a cylindrical body, a flange having a face that receives a diaphragm, and internal threads that receive the overflow pipe fitting." The corresponding structure further includes "a test cap with an inner surface made of malleable material." The '970 patent also discloses as corresponding structure "a plug with a diaphragm on one end."

The Court rejects IPS's proposed limitation that the diaphragm on the test caps must be removed by cutting or breaking for the same reasons the Court rejected this limitation for the thin diaphragm disclosed in the '220 patent. See supra Part III.C.1.b.1.

Similar to the claims of the '970 patent, the claims of the '272 patent do not contain the phrase "means for sealing." Therefore, with regards to the '272 patent, the Court construes

only the limitation "means for preventing fluid flow." The '272 patent specification discloses substantially the same structure as disclosed in the '970 patent with the exception that the '272 patent excludes the thin diaphragm structure disclosed in the '220 patent. Accordingly, the Court does not incorporate the '220 patent construction by reference in the Court's construction for the '272 patent. The Court does incorporate the remainder of the corresponding structure disclosed in the '970 patent by reference in the construction of "means for preventing fluid flow" for the '272 patent.

2. "Associated with said outer end"

WCM argues that no construction of this term is required, and that this term can be understood according to its plain and ordinary meaning. (ECF No. 62 at 11.) WCM further contends that "there is no evidence that the inventor of the asserted patents intended for this term to have a specialized meaning." (ECF No. 79 at 16.) WCM disagrees with IPS's construction as too narrow and disagrees that the specifications teach that the claim term is limited to being integrally formed with a thin diaphragm. (ECF No. 81 at 14.)

IPS asserts that the claim term should mean "integrally attached to form a single, inseparable piece of plastic such that removal of the sealing element is achieved by cutting or

breaking." (ECF No. 63 at 11.) IPS argues that WCM's construction is an attempt to construe the claim term "in a manner which is broader than any disclosure of the '220 Patent." (ECF No. 78 at 8.) IPS contends that WCM's construction would impermissibly allow "WCM to obtain a claim scope which it continuously and expressly disclaimed during the prosecution of the asserted patents." (ECF No. 80 at 19.)

The Court agrees with WCM. Claim terms are afforded their plain and ordinary meaning, "unless the patent specification or prosecution history indicates a contrary meaning." Phillips, 415 F.3d at 1313. In the instant case, the claims and specifications of the Asserted Patents that include the term "associated with said outer end" support a finding of plain and ordinary meaning. The '132 Patent claims an overflow assembly where "said means for preventing fluid flow is removable." ('132 patent, col. 12, ll. 22-23, col. 14, ll. 7-8, ECF No. 75-3 at PageID 2210 (emphasis added).) A claim of a removable seal contradicts IPS's proposed construction of being "integrally attached."

The '584 patent instructs that in the preferred embodiment of the invention, the diaphragm is "integrally formed with fitting 58." ('584 patent, col. 3, ll. 53-55, ECF No. 75-2 at PageID 2182.) It is generally inappropriate to read limitations

from the preferred embodiment onto the scope of the claims of the patent. Acumed LLC v. Stryker Corp., 483 F.3d 800, 807 (Fed. Cir. 2007); Texas Instruments, Inc. v. U.S. Int'l Trade Comm'n, 805 F.2d 1558, 1563 (Fed. Cir. 1986). Thus, although IPS's construction exists in the specifications of the Asserted Patents and is the preferred structure for attaching a seal to the overflow inlet, it would be improper to limit the scope of the term "associated with the outer end" to such a narrow construction. See Acumed, 483 F.3d at 807 ("Again, [Appellants'] argument is an improper attempt to read a feature of the preferred embodiment into the claims as a limitation.").

This conclusion is supported by alternative embodiments expressed in the specifications of the Asserted Patents. Referring to figures 14a, 14b, and 15, the '584 patent discloses a "removable seal . . . that may be selectively inserted or removed from the overflow assembly. . . ." ('584 patent, col. 5, ll. 44-46, ECF No. 75-2 at PageID 2183.) The figures illustrate this alternative embodiment, which includes a pull ring for removal. (Id. col. 5, l. 61 - col. 6, l. 2.) The Court finds this embodiment could not be properly construed as having a seal that is "integrally attached" to the outer end of the overflow inlet. Furthermore, the seal in this embodiment is not removed by either cutting or breaking. (Id. at col. 5, ll.

46-53.) Referring to figure 15, the '584 patent discloses another embodiment where the seal is removable "at the discretion of the user" from "a slot 144b that is formed in the retainer nut 150." (Id. at col. 6, ll. 3-10.) This seal also is neither "integrally attached" nor "removed by cutting or breaking."

The '970 patent discloses a test cap that is attached to the overflow inlet if further testing is required "subsequent to removal of a diaphragm." ('970 patent, col. 8, ll. 1-4, ECF No. 75-8 at PageID 2288.) Although the specification suggests "the diaphragm 54 of the test cap 176 . . . may be cut away," the fact that the test cap is added subsequent to the use of the original seal suggests that the test cap is not "integrally attached" to the overflow inlet. (See id. col. 8, ll. 11-16.) For these reasons, the Court finds IPS's proposed construction too narrow and improperly reads limitations from the preferred embodiment onto the scope of the claims. Accordingly, the Court construes "associated with said outer end" as having its plain and ordinary meaning.

3. "Nut" and "Nut element"

WCM argues that this claim term should mean "an object having a threaded bore to selectively engage an externally threaded object." (ECF No. 62 at 12.) WCM asserts that

"[t]here is simply no need to add further limitations by requiring a nut body and any radially extending lugs . . . particularly where those limitations make other claim terms redundant." (Id. at 13; see also ECF No. 81 at 15 ("IPS proposes that these terms be construed as requiring a nut body and radially extending lugs.")). WCM avers its construction is supported by the specifications of the Asserted Patents. (ECF No. 79 at 3.) WCM contends that IPS's construction having a nut body and radially extending lugs would contradict the plain language of the patents. (ECF No. 81 at 16.)

IPS asserts that the claim term should mean a "device for affixing the overflow assembly to the bathtub wall having an internal, circular threaded surface, a nut body, and radially extending lugs." (ECF No. 63 at 13.) IPS argues that the claim term is made of three distinct portions: (1) an inner, circular threaded surface, (2) a nut body, and (3) radially extending lugs." (Id. at 13-14; see ECF No. 78 at 22-23.) In its rebuttal brief, IPS does not provide additional arguments. (See ECF No. 80.)

Regarding the terms "nut" and "nut element", the claims of the Asserted Patent contemplate inclusion of at least one radially extending lug. Claim 1 of the '220 patent claims a nut element with "a plurality of lugs extending radially from said

nut element." ('220 patent, col. 6, ll. 24-28, ECF No. 75-1 at PageID 2166.) Similarly, independent claim 1 of the '970 patent describes a nut element "having an outer periphery with a series of radially extending lugs. . . ." ('970 patent, col. 9, ll. 45-48, ECF No. 75-8 at PageID 2289.) Additionally, independent claim 6 claims a nut element and plurality of lugs that "constitute a single-piece unit." (Id. col. 10, ll. 30-31.) Claim 1 of the '584 patent claims a "nut element having at least one lug extending radially therefrom." ('584 patent, col. 6, ll. 39-42, ECF No. 75-2 at PageID 2183 (emphasis added).) The '132 patent's independent claim 1 claims a nut element "having a plurality of lugs extending radially from said nut element." ('132 patent, col. 11, ll. 41-47, ECF No. 75-3 at PageID 2210.) Claim 1 of the '272 patent also claims a "nut having an outer periphery with a series of radially extending cap retention elements." ('272 patent, col. 9, ll. 51-52, ECF No. 75-4 at PageID 2243.) In infra Part III.C.a.6, the Court construes "cap retention elements" as "lugs on the nut element for retaining a cap." Therefore, a construction of the term "nut" that includes the limitation of radially extending lugs is consistent with the construction of "cap retention elements."

The specifications of the Asserted Patents confirm the limitation of at least one lug on the nut or nut element. The

specifications of the '220 patent and '132 patent disclose the nut element and radially extending lugs as a "single-piece unit" in one embodiment. ('220 patent, col. 3, ll. 66 - col. 4, l. 1, ECF No. 75-1 at PageID 2165; '132 patent, col. 9, ll. 19-21, ECF No. 75-3 at PageID 2209.) The specification of the '584 patent discloses a nut element in engagement with the cap. ('584 patent, col. 3, ll. 44-45, ECF No. 75-2 at PageID 2182.) The interconnection between the nut and cap is achieved by the radially extending lugs "frictionally detachably engag[ing] the inner surface of flange 76 of cap 78." (Id. col. 3, ll. 40-43.) The specifications of the '970 patent, the '132 patent, and the '272 patent disclose similar engagement between the lugs of the nut element and the cap. (See, e.g., '970 patent, col. 6, ll. 24-26, ECF No. 75-8 at PageID 2287; '132 patent, col. 9, ll. 21-22, ECF No. 75-3 at PageID 2209; '272 patent, col. 6, ll. 24-26, ECF No. 75-4 at PageID 2241.) At no point do the claims or specifications of the Asserted Patents describe engagement between the nut and cap through any structure other than the lugs or cap retention elements. Thus, without the lugs, engagement between the nut and cap as disclosed in the Asserted Patents would not be achieved.

The prosecution history further supports inclusion of at least one lug in the construction of "nut" and "nut element."

WCM's original claims were rejected by the examiner in part because a combination of the Gebert and Schrott references rendered the claims obvious. ('970 Patent Appl., Sept. 17, 2012 Resp. to Office Action at 6, ECF No. 63-17.) Gebert disclosed a ring interconnected to an inner surface of a cap. (Id.) In response to the rejection, WCM distinguished the claimed invention on the basis that the prior art "does not disclose using a nut element having 'a series of radially extending lugs' or 'a plurality of lugs' that selectively and detachably receives an overflow cap." (Id. (emphasis added).) In his response to the office action, patentee further asserted that "[t]he claims require that the cap be interconnected to the lugs of the nut element." (Id.)

WCM's argument that including lugs in the construction is redundant with the claim language is unsupported by case law. Redundancy typically occurs in the context of claim differentiation where a dependent claim expresses a narrower description of the invention. See Phillips, 415 F.3d at 1324 (citing Dow Chem. Co. v. United States, 226 F.3d 1334, 1341-42 (Fed.Cir.2000) (concluding that an independent claim should be given broader scope than a dependent claim to avoid rendering the dependent claim redundant)); Trebro Mfg., Inc. v. Firefly Equip., LLC, 748 F.3d 1159, 1167 (Fed. Cir. 2014); SunRace Roots

Enter. Co. v. SRAM Corp., 336 F.3d 1298, 1303 (Fed. Cir. 2003).

In such cases, using language to construe a term in the independent claim that recites limitations expressed in the dependent claim renders the dependent claim redundant. See Trebro, 748 F.3d at 1167 ("To read the bed frame limitation from [dependent] claim 10 into [independent] claim 1 . . . renders the term redundant and offends principles of claim differentiation."). Looking to the language of the independent claim that discloses the invention in order to properly interpret a disputed term is not redundant, but rather a necessary step in the construction of a claim. See Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996) ("First, we look to the words of the claims themselves, both asserted and nonasserted, to define the scope of the patented invention."). Accordingly, the Court finds that the nut claimed in the Asserted Patents contains at least one lug.

The evidence also indicates that the nut element is threaded, and both parties agree that the construction should include a threaded limitation. IPS characterizes the limitation as an "internal, circular threaded surface," (ECF No. 63 at 13), whereas WCM proposes that the limitation should be "having a threaded bore to selectively engage an externally threaded object," (ECF No. 62 at 12). The claims of the Asserted Patents

contemplate a nut that is threaded for engagement with the upper end of the overflow assembly. Claim 1 of the '220 patent describes the nut element as having "a threaded portion that is compatible with said threads associated with said inlet for mounting said nut element to said upper end portion." ('220 patent, col. 6, ll. 24-25, ECF No. 75-1 at PageID 2166.) Similarly, claim 1 of the '584 patent describes the nut element in similar terms claiming, "a nut element compatible with the threads wherein the nut element has a threaded portion for threadably mounting to said upper end portion." ('584 patent col. 6, ll. 39-41, ECF No. 75-2 at PageID 2183.) The '970, '132, and '272 patents employ comparable claim language. ('970 patent, col. 9, ll. 45-46, ECF No. 75-8 at PageID 2289; '132 patent, col. 11, ll. 44-45, ECF No. 75-3 at PageID 2210; '272 col. 9, ll. 46-48, ECF No. 75-4 at PageID 2243.) Accordingly, the Court finds the nut is limited as having threads for engagement to the upper end of the overflow assembly.

Although the Court agrees with IPS that construction of "nut" and "nut element" properly incorporates the above-mentioned limitations, IPS's construction goes too far in narrowing the scope of the meaning of the terms. IPS proposes that the nut be a "device for affixing the overflow assembly to the bathtub wall" and "nut body." Unlike the requirement that

the radially-extending lugs engage a cap, the claim language does not require that the nut affix the overflow assembly to the bathtub wall. (See '220 patent, col. 6, ll. 24-26, ECF No. 75-1 at PageID 2166 (requiring only that the nut element mount to the upper end portion of the overflow assembly).) Nor does the claim language require the nut to be a "device" or have a "nut body." These two terms are not found in the relevant claim language in any of the Asserted Patents. Including "device" or "nut body" in the construction unnecessarily complicates the meaning of the term.

IPS's argument that the language in claim 11 of the '272 patent should define the meaning of "nut" and "nut element" is unavailing. Although that claim is similar to other claims using the terms nut or nut element, the patentee's use of different terminology indicates an intent to change the scope of the claim, however slight. See Andersen Corp. v. Fiber Composites, LLC, 474 F.3d 1361, 1369 (Fed. Cir. 2007) ("[Claim differentiation] is based on 'the common sense notion that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.'") (quoting Karlin Tech. Inc. v. Surgical Dynamics, Inc., 177 F.3d 968, 971-72 (Fed. Cir. 1999)). Because claim 11 does not use either of the terms "nut" or "nut element," claim 11 is

not implicated in the construction of those terms. Accordingly, the Court construes the terms "nut" and "nut element" as "an object having at least one radially extending lug and a threaded bore to selectively engage the upper end of the overflow assembly."

4. "Threaded portion"

The parties have agreed upon the meaning of the claim term "threaded portion." In the Appendix of their Joint Submission for the Claim Construction hearing, IPS adopted WCM's proposed construction that "threaded portion" carries its plain and ordinary meaning. (ECF No. 83-1 at 10, PageID 3624.) The Court concludes that the plain and ordinary meaning of this claim term is consistent with the claims, specification, and prosecution histories of the Asserted Patents. Accordingly, "threaded portion" will carry its plain and ordinary meaning.

5. "Lug," "plurality of lugs," "series of retention lugs," and "series of radially extending lugs"

IPS argues that the term "lug" has a specialized meaning within the claims and specifications of the Asserted Patents. (ECF. No. 63 at 14.) IPS asserts that the patentee here has used "lug" to mean a "deflectable retention hook that protrudes from the body of the nut element wherein the arc length between each protrusion is larger than or equal to the arc length of the protrusion itself." (Id.) IPS bases its construction on

language in the specifications of the '220, '970, and '584 patents to the effect that the "lugs 92 detachably engage the inner surface of a cap 96." (Id. at 15.) Further, IPS points to several figures in the patents which "depict lugs as deflectable protrusions that resemble hooks designed to receive the cap by means of a snap fit." (Id.) The precise language of "deflectable protrusions" and "hooks" are not found in the text of the Asserted Patents.

WCM argues the following: (1) both "plurality of lugs extending radially" and "series of radially extending lugs/radially extending cap retention elements" should mean "multiple lugs extending outwardly from the central axis through the bore of the nut element"; (2) "series of retention lugs" can be understood according to its plain and ordinary meaning; and (3) "at least one lug extending radially" should mean "at least one lug extending outwardly from the central axis through the bore of the nut element." (ECF No. 62 at 17-18.) WCM asserts that IPS's construction, which includes "deflectable" or "retention hook," has no support in the Asserted Patents. (ECF No. 79 at 7.) WCM contends that IPS's construction proposing "deflectable retention hooks" improperly relies on a single embodiment. (ECF No. 81 at 16-17.) Further, because the patentee did not use the proposed language in the claims, those

terms should not be read as limitations on the claims. (ECF No. 62 at 19.)

The Court agrees in large part with WCM. It is generally improper to read a limitation from a single embodiment into the claims of a patent. Phillips, 415 F.3d at 1323 ("[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments."); Eolas Techs. Inc. v. Microsoft Corp., 399 F.3d 1325, 1337 (Fed. Cir. 2005) ("This court 'consistently declines to construe claims according to the preferred embodiment' (citation omitted)). IPS "cannot overcome the plain meaning of [lug] by pointing to an embodiment disclosed in the specification or prosecution history." Toshiba Corp. v. Imation Corp., 681 F.3d 1358, 1369 (Fed. Cir. 2012).

IPS's proposed construction of the term "lug" as "a retention hook . . . wherein the arc length between each protrusion is larger than or equal to the arc length of the protrusion itself" is too narrow and constitutes only one limited embodiment of the lug portion of the invention. Neither of the terms "retention hook" and "arc length" are found in any of the claims or specifications of the Asserted Patents. Rather, IPS relies on the language of the '220 patent specification, "a series of radially extending lugs 92 along the

nut 90 outer periphery to constitute a single-piece unit". (ECF No. 63 at 14-15.) IPS asserts that this language, in conjunction with the drawing of the nut element in Figure 4 of the '220 patent, supports IPS's construction. (Id.) Neither the functions of the lugs nor the language in the specifications, however, require "retention hooks" or a specific arc length between lugs.

The specification in the '220 patent describes one function of the lugs as "detachably engag[ing] the inner surface of a cap." ('220 patent, col. 4, ll. 1-2, ECF No. 75-1 at PageID 2165.) The specification in the '220 patent further discloses that the nut element "removably secures the overflow pipe 62 to the bathtub 20 by compressing the end wall 24 between the nut element 90 and the lip 74." (Id. col. 3, ll. 62-64.) It is conceivable that employing "retention hooks" and fixing a larger arc length could assist in securing the overflow pipe to the bathtub, but nothing in the specification or claims requires either of these limitations for this purpose.

On the other hand, the term "lug" must be construed in context. See Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1319 (Fed. Cir. 2005). Here, the independent claims of the Asserted Patents indicate that the "lugs" are intended to engage with the cap. (See, e.g., '220 patent, col. 6, ll. 30-31, 64-

65, ECF No. 75-1 at PageID 2166 (claiming a cap that is "detachably interconnected to at least one of the said plurality of lugs. . . .") (emphasis added); '970 patent, col. 6, l. 24-26, ECF No. 75-8 at PageID 2287 ("The lugs 78 of the nut 74 are adapted to receive an inner surface of a cap 86.") (emphasis added); '584 patent, col. 6, l. 43, ECF No. 75-2 at PageID 2183; '272 patent, col. 9, ll. 52-54, ECF No. 75-4 at PageID 2243; '132 patent, col. 12, ll. 4-5, ECF No. 75-3 at PageID 2210.)

Moreover, the prosecution history suggests that the lugs carry a limitation of engaging with the cap. During prosecution of the '970 patent, WCM differentiated the claimed invention from the prior art on the basis that the prior art does not disclose use of a nut element with a plurality of lugs "that selectively and detachably receives an overflow cap." ('970 Patent Appl., Sept. 17, 2012 Resp. to Office Action at 6, ECF No. 63-17 (emphasis added).) The Gebert reference disclosed a ring interconnected to an inner surface of a cap. (Id.) Thus, engagement between lugs and the cap was integral to distinguishing WCM's invention from the prior art. (See id.) Accordingly, the Court construes the term "lug" as "a lug that detachably engages with the cap" consistent with the Court's construction of the term "detachably engages."

Both parties agree that the term "a series of retention lugs" can be construed according to its plain and ordinary meaning consistent with the construction of the term "lugs." (See ECF No. 80 at 19, n. 8; ECF no. 62 at 18.) The Court finds no intrinsic or extrinsic evidence to compel a different construction. Accordingly, the Court construes "a series of retention lugs" as its plain and ordinary meaning.

IPS also asserts the terms "plurality of lugs extending radially," "series of radially extending lugs," and "at least one lug extending radially" should be construed as their plain and ordinary meaning consistent with the construction of the term "lugs." (ECF No. 80 at 19, n. 8.)

WCM proposes a construction of "multiple lugs extending outwardly from the central axis through the bore of the nut element" for the terms "plurality of lugs extending radially" and "series of radially extending lugs." WCM cites to Karl Storz Endoscopy-Am., Inc. v. Smith & Nephew, Inc. in support of reinterpreting the term "plurality of lugs" as "multiple lugs." 2:07-02702-JPM-cgc, 2010 WL 3259495, at *6 (W.D. Tenn. Aug. 18, 2010) ("As discussed at the Markman hearing, the Court construes this term as 'two or more circuits, each of which enables communication between a single piece of surgical equipment and the central controller.'") (internal citations omitted). WCM

provides no further extrinsic evidence to support this interpretation. WCM supports defining "series" as "multiple" with the following dictionary definition: a group or a number of related or similar things, events, etc., arranged or occurring in temporal, spatial, or other order or succession. (ECF No. 79 at 8 n.9 (citing Dictionary.com, <http://dictionary.reference.com/browse/series?s=t>.)

The Court finds little evidence to support a construction other than plain and ordinary meaning for these terms. Although these terms may have similar meaning in the context of each patent, different claim language is presumed to carry a different meaning. See Andersen, 474 F.3d at 1369. The Court notes that the dictionary definition provided by WCM, unlike WCM's proposed construction, does not include the term "multiple." (See ECF No. 79 at 8 n.9.) Further, the Court finds that the terms "plurality of lugs extending radially" and "series of radially extending lugs" are not so technical as to require the Court's separate interpretation. See Acumed, 483 F.3d at 806 ("[S]ound claim construction need not always purge every shred of ambiguity. The resolution of some line-drawing problems-especially easy ones like this one-is properly left to the trier of fact.") Accordingly, the Court construes "plurality of lugs extending radially" and "series of radially

extending lugs" as each term's plain and ordinary meaning consistent with the Court's construction of "lugs."

WCM asserts the term "at least one lug extending radially" should be construed as "at least one lug extending outwardly from the central axis through the bore of the nut element." (ECF No. 62 at 18.) For the reasons just stated, the Court declines to interpret this term beyond its plain and ordinary meaning.

6. "Cap retention elements" and "series of radially extending cap retention elements"

WCM argues that term "cap retention elements" should be construed as the term's plain and ordinary meaning. (ECF No. 79 at 10.) WCM proposes that the plain and ordinary meaning as understood by one of ordinary skill in the art is "lugs on the nut/device for retaining a cap." (Id.)

IPS argues that the term "cap retention elements" is ambiguous and should be construed as a means-plus-function term pursuant to 35 U.S.C. § 112(f). (ECF No. 78 at 16-17.) To support this argument, IPS asserts that the term "cap retention elements" does not have a specialized meaning in the plumbing field and does not "indicate any particular structure to a person of ordinary skill [in] the art." (Id. at 16.) IPS argues that because there is a lack of structure disclosed with the term, "cap retention elements" should be construed under 35

U.S.C. § 112(f) as "received within a cap." (Id.) IPS further asserts that the patentee's decision to modify the term "lugs" to "cap retaining elements" during prosecution of the '132 and '272 patents further shows that the term should be construed as a means-plus-function claim. (Id. at 17.)

a) "Cap retention elements"

As described at length, supra Part III.C.1.a, "failure to use the word 'means' creates a rebuttable presumption that the drafter did not intend the claims to be governed by [§ 112(f)]." Flo Healthcare Solutions, 697 F.3d at 1373. Although the presumption can be overcome where the claim does not express "sufficient definite structure," the presumption is strong and rarely overcome. Apple Inc. v. Motorola, Inc., 757 F.3d at 1297. The means-plus-function inquiry is a two-step test. Id. at 1296. "To determine the proper construction of a claim term, we look to the words of the claims themselves, the written description, the prosecution history, and any relevant extrinsic evidence." Inventio, 649 F.3d at 1357 (citing Phillips, 415 F.3d at 1315-17).

The Court agrees with WCM. The term cap retention elements should be construed according to its plain and ordinary meaning in light of the claim language and specification. Because the term "means" is not included in the disputed claim limitations,

IPS carries the burden of proving that the term "cap retention elements" is a means-plus-function claim limitation. See Inventio, 649 F.3d at 1360.

As IPS has pointed out, the term "cap retention elements" was used to replace the term "lugs" during the prosecution of the '132 and '272 patents. (ECF No. 78-14 at 4.) Although such a modification may indicate a broadening of the scope of the claim, the use of the term in this case is very similar to the use of "lugs" in the claims of the other Asserted Patents. (See id.) In the '132 patent, independent claim 14 discloses a nut element "having a series of radially extending cap retention elements that are spaced about a longitudinal axis defined by said nut element, there being gaps between each of said radially extending cap retention elements. . . ." ('132 patent, col. 12, ll. 45-51, ECF No. 75-3 at PageID 2210.) Similar to independent claim 14 of the '132, the '220 and '970 patents claim "a series of radially extending lugs" that are in engagement with a cap. ('220 patent, col. 8, ll. 1-3, ECF No. 75-1 at PageID 2167; '970 patent, col. 9, ll. 47-49, ECF No. 75-8 at PageID 2289.) Thus, like the structures disclosed in the other Asserted Patents relevant to the term "lugs," similar structures disclosed in the '132 and '272 patents support the presumption against a means-plus-function construction.

Several structures corresponding to "cap retention elements" are found in the specifications of the '132 and '272 patents. The '132 patent discloses an embodiment where "[t]he outer periphery 72 of nut element 68 has a series of radially extending lugs 74 which frictionally detachably engage the inner surface of flange 76 of cap 78." ('132 patent, col. 5, ll. 42-45, ECF No. 75-3 at PageID 2207.) In another embodiment of the invention, the '132 patent again discloses a nut with "radially extending lugs" that "detachably engage the inner surface of a cap." (Id. col. 6, ll. 38-41.) Similar structures are disclosed throughout the '132 and '272 patents (See id. col. 9, ll. 19-22; '272 patent, col. 2, ll. 21-26, ECF No. 75-4 at PageID 2239.) The '272 patent describes an additional embodiment where "the nut . . . includes a plurality of protrusions 94 aligned on a ring 98 that is positioned adjacent to the plurality of the lugs 78. The protrusions 94 allow for enhanced interconnectability between the nut 74 and the cylindrical fitting 46 by providing a plurality of finger holds." ('970 patent, col. 2, ll. 38-43, ECF No. 75-8 at PageID 2285.) Based on the structures disclosed in the specifications, the Court finds that, at a minimum, the structural limitations of detachable engagement with the cap and location on the outer periphery of the nut apply to the term "cap retention elements".

Furthermore, the claims do not merely recite an element used for retaining the cap. Rather, the claims go on to express that the cap retention elements "are spaced about a longitudinal axis defined by said nut element, there being gaps between each of said radially extending cap retention elements." (Id. col. 12, ll. 48-50; '272 patent, col. 9, ll. 51-54, ECF No. 75-4 at PageID 2243 ("said nut having an outer periphery with a series of radially extending cap retention elements which detachably engage an inner surface of a cap which fits over said nut").) Accordingly, the Court finds the claim language provides sufficiently definite structure to avoid rebuttal of the presumption against means-plus-function status under § 112(f).

IPS asserts that the prosecution history supports a means-plus-function construction because WCM amended the claim terminology from "lugs" to "cap retention elements." (ECF No. 17.) It is presumed that where different terminology is used, terms will have different meanings. See Andersen, 474 F.3d at 1369. WCM amended the claim terminology in response to a rejection for double patenting based on claims in the '220 patent that used the term "lugs." See December 27, 2012 Non-Final Rejection of U.S. Patent Application 13/461,422. Here, it is possible that by changing the terminology in the '433 Application to "cap retention elements," WCM increased the scope

of the claims to include more than just "lugs." Notwithstanding the increase in scope, the structure expressed in the '132 patent's claim language and specification are substantial. Moreover, both sides agree that "cap retention elements" should be construed as or similar to "lugs." (See ECF No. 78 at 17-18; ECF No. 79 at 10-11.) Accordingly, the Court finds that the intrinsic evidence supports the presumption against a means-plus-function construction for the term "sealing element."

Similar to IPS's argument regarding the term "sealing element," IPS provides extrinsic evidence that "cap retention elements" as claimed in the Asserted Patents lacks sufficient structure to avoid construction under § 112(f). (See ECF No. 78 at 16.) IPS's expert Paschal states in Defendant's Supplemental Expert Claim Construction Report (ECF No. 78-4) that the term "cap retention elements" has no specific meaning in the plumbing industry. (Id. at 25.) Nor does the term indicate any particular structure to a person of ordinary skill in the art according to Paschal. (Id. at 26.) Paschal further asserts that "cap retention elements" expresses the function "received within a cap" and provides no structure. (Id. at 25.) WCM's expert Higgins merely asserts that "cap retention elements" should be construed "the same as or similar to the manner in which the term 'lugs' are construed." (ECF No. 79-10 at 49.)

IPS concludes that because there is little dispute that "cap retention elements" are essentially the same as "lugs," the construction of "cap retention elements" should be limited to the "lug" disclosures in all the Asserted Patents. (ECF No. 78 at 18.)

IPS, however, does not argue that the term "lugs" should be construed as a means-plus-function term. (ECF No. 63 at 14.) Instead, IPS recognizes that "lugs" have a specific structure and meaning in the Asserted Patents. (See id. at 14-15.) The same structure present for the term "lugs" exists to a large extent for the term "cap retention elements." This conclusion is evidenced by the ample structure provided by the intrinsic evidence. Accordingly, the Court is satisfied that the term "cap retention elements" is not a means-plus-function claim limitation governed by § 112(f). The Court hereby construes the term "cap retention elements" as "lugs on the nut element for retaining a cap" consistent with the Court's construction of the term "lugs."

b) "Series of radially extending cap retention elements"

Both parties assert that the language "series of radially extending" added to the term cap retention elements should be construed in its plain and ordinary meaning. (See ECF No. 79 at 10; ECF No. 80 at 19 n.9.) The Court concludes that the plain

and ordinary meaning of this claim term is consistent with the claims, specification, and prosecution histories of the Asserted Patents. Accordingly, "series of radially extending cap retention elements" will carry its plain and ordinary meaning consistent with the Court's construction of the term "cap retention elements."

7. "Spaced about a longitudinal axis defined by said nut element"

WCM proposes the construction "spaced about a central axis through the bore of the nut element" for this term. (ECF No. 62 at 15; ECF No. 79 at 11.) In support, WCM asserts that "this term should be construed as it has the potential to be misconstrued depending on how one views the longitudinal axis of the nut element." (ECF No. 79 at 11.) That is, "the longitudinal axis is the axis passing through the bore of the nut element." (Id.; ECF No. 62 at 15.) "WCM will alternatively accept a plain and ordinary meaning construction." (ECF No. 81 at 21.)

IPS asserts that the intrinsic record of the Asserted Patents support the plain and ordinary meaning of the term. (ECF No. 63 at 20.) IPS provides no additional argument in its Supplemental or Responsive Briefs. (See generally ECF No. 78, 80.)

The Court concludes that construing this term to carry its plain and ordinary meaning raises no confusion and is consistent with the claims, specification, and prosecution histories of the Asserted Patents. Indeed, WCM's own expert agrees with IPS's expert that the term should be given its plain and ordinary meaning. (ECF No. 62-11 at 8, PageID 1201 ("Having reviewed the '220 Patent, I agree that this term should be given its plain and ordinary meaning.")) Accordingly, this term will be given its plain and ordinary meaning.

8. "Detachably interconnected," "detachably associated," "detachably engage," and "selectively interconnected to said nut"

WCM argues the following: (1) "detachably interconnected" can be understood according to its plain and ordinary meaning; (2) both "detachably associated" and "detachably engage" should mean "selectively engaged or disengaged"; and (3) "selectively interconnected to said nut" should carry its plain and ordinary meaning. (ECF No. 62 at 19-21; see also ECF No. 79 at 16-19.) In its response brief, WCM further asserts that "[t]hese four terms are non-technical terms, and are not specific to any particular industry." (ECF No. 81 at 18.) WCM contends that IPS's construction requiring a "snap-fit connection" is impermissibly narrow. (Id. at 19.)

IPS asserts that "the claims, specifications, drawings, and file histories of the Asserted Patents disclose that these claim terms refer to 'a snap-fit attachment between the deflectable lugs extending from the body of the nut element and a raised ring on the interior of the cap that permits removal by axial force.'" (ECF No. 63 at 16.) IPS further supports its argument with the prosecution history of the '220 patent. IPS first points to a statement by patentee in a response to an office action differentiating the cap disclosed in the '220 patent and the cap disclosed in the Espey patent U.S. Patent No. 5,350,266. "[T]he 'lugs' 21-26 of Espey are not detachably engaged (Claim 11) nor are they selectively interconnected (Claim 21) to the inner surface of a cap as claimed. Rather, Espey's cap is fitted to a nut by pressing downwardly such that the projections 52 snap into slots 33." (ECF No. 63 at 17.) IPS next points to statements in Application No. 10/674,862 where patentee distinguished the invention from the prior art. (Id.) "[B]ecause of the lugs, the cap is installed on the lug of the nut by a frictional engagement, and is likewise detachable." (Id.)

The Court agrees in large part with WCM. The claims of the Asserted Patents do not use the terminology "snap-fit." Nor do they describe such a specific structure. The Asserted Patents

generally employ the disputed terms "detachably interconnected," "detachably associated," "detachably engage," or "selectively interconnected to said nut" to describe the connection between the cap and lugs. (See, e.g., '220 patent, col.6, 30-31, ECF No. 75-1 at PageID 2166; '584 patent, col. 6, l. 43, ECF No. 75-2 at PageID 2183; '970 patent, col. 9, ll. 48-49, ECF No. 75-8 at PageID 2289; '132 patent, col. 11, l. 50, ECF No. 75-3 at PageID 2210; '272 patent, col. 9, ll. 52-53, ECF No. 75-4 at PageID 2243.) '220 patent independent claim 12 describes "a cap that fits over said nut." ('220 patent, col. 8, l. 3, ECF No. 75-1 at PageID 2167.) The mere mention that the cap fits over the nut is hardly reason to construe this connection as "a snap-fit attachment between the deflectable lugs extending from the body of the nut element and a raised ring on the interior of the cap that permits removal by axial force." The Court finds similar claim language in the '584, '132, and '272 patents equally unavailing of IPS's position. ('584 patent, col. 9, l. 49, ECF No. 75-2 at PageID 2184; '132 patent, col. 12, l. 5, col. 13, l. 17, ECF No. 75-3 at PageID 2210-11; '272 patent, col. 9, ll. 53-54, col. 10, ll. 36-37, 59-60, col. 11, ll. 21-22, ECF No. 75-4 at PageID 2243-44.) IPS's proposed construction is so specific as to refer only to a single embodiment of the invention apparently disclosed in the

abstracts of the '584 and '132 patents. (See '584 patent at 1, ECF No. 75-2 at PageID 2168 ("A decorative cap is frictionally snapped into engagement with protrusions on the outer surface of the nut."); '132 patent at 3, ECF No. 75-3 at PageID 2184.) Yet, even those references do not employ the language "snap-fit."

Figure 4 of the '584 patent, and Figures 4 and 6 of the '970 patent show a raised ring on the cap that engages the nut, but none of the other figures require this raised ring. ('584 patent fig. 4, ECF No. 75-2 at PageID 2173; '970 patent figs. 4, 6, ECF No. 75-8 at PageID 2265, 2267.) The specification language referring to Figure 4 of the '584 patent merely discloses that the lugs "frictionally detachably engage the inner surface of flange 76 of cap 78." ('584 patent, col. 3, ll. 42-43, ECF No. 75-2 at PageID 2183.) Further, Figure 3 makes clear that flange 76 does not refer to a ring within the cap, but rather refers generally to the surface of the cap that surrounds the nut. ('584 patent fig. 4, ECF No. 75-2 at PageID 2173.) The specification of the '970 patent states only that "[t]he lugs 78 of the nut 74 are adapted to receive an inner surface of a cap 86." ('970 patent figs. 4, 6, ECF No. 75-8 at PageID 2265, 2267) This evidence is an insufficient basis for IPS's narrow construction.

IPS argues that the prosecution history of the '220 patent supports its construction. IPS cites a Response to an Office Action dated September 13, 2010. In distinguishing the claimed invention from the prior art WCM explained, "the 'lugs' 21-26 of Espey are not detachably engaged (Claim 11) nor are they selectively interconnected (Claim 21) to the inner surface of a cap as claimed. Rather, Espey's cap is fitted to a nut by pressing downwardly such that the projections 52 snap into slots 33." (ECF No. 63-19 at 16.) IPS argues that this statement shows that WCM's lug "must protrude from the body of the nut and the cap must snap onto the lugs themselves and not into the space between the lugs." (ECF No. 63-19 at 16.) The Court rejects this argument. The key distinction between WCM's claimed invention and the Espey reference is found on the next page where WCM explains that "one of skill in the art will appreciate that Espey's cap 40 once connected to the bike nut 20 is not easily removed, . . . in contrast to the 'detachable engagement' or 'selective interconnection' limitations of the present claims." (Id. at 17.) Nothing in the statement requires a snap fit for WCM's cap and lugs. If anything, the statement indicates that WCM has disclaimed a snap fit

engagement where the cap is "pressed downwardly" and the lugs snap into slots on the cap such that the cap is "not easily removed." (See ECF No. 63-19 at 16-17.)

Accordingly, the Court finds that IPS's proposed construction is too narrow in scope.

On the other hand, WCM's proposed constructions do not go far enough in describing the connection between the nut and the cap. The specifications of the Asserted Patents make clear the cap does not merely cover the nut, but rather a frictional engagement exists between the lugs and the cap. For example, the specification of the '584 patent describes nut element lugs as "frictionally detachably engaging the inner surface of flange of cap." ('584 patent, col. 3, ll. 40-43, ECF No. 75-2 at PageID 2182 (emphasis added).) The summary of the '132 patent describes as part of the invention "[a] decorative cap [that] is frictionally engaged onto protrusions located on the outer surfaces of the nut." ('132 patent, col. 3, ll. 53-55, ECF No. 75-3 at PageID 2206 (emphasis added).) The '272 patent and '970 patent specifications describe the lugs as being "adapted to receive an inner surface of a cap 86." This language implies a frictional connection between the lugs and the cap.

Furthermore, WCM explains in its Response Brief:

WCM's description of how the cap may "frictionally spin" about the lugs merely recognizes that a

"frictional" or "interference fit" between the lugs and the cap is not one that affixes the cap in a particular orientation, and that the inner surface of the cap can "frictionally slide over the surface of the at least one lug simply by having the user "grasp[]" and "turn[]" it.

(ECF No. 81 at 19 (emphasis added).) Accordingly, the Court finds that the connection between the lugs and cap are limited to a frictional connection.

The Court also agrees with IPS that the terms "detachably interconnected," "detachably associated," and "detachably engage," are employed interchangeably throughout the Asserted Patents. Even if there are subtle differences between the terms when used in context, the Court finds that all these terms refer to a detachable frictional engagement for the reasons previously discussed. The Court leaves determination of the subtle differences, if any, up to the trier of fact. See Acumed, 483 F.3d at 806. Accordingly, the Court construes all three terms as "detachably frictionally engaged." The Court further construes the term "selectively interconnected to said nut" as "selectively frictionally engaged to said nut."

9. "Cap"

WCM argues that "cap" can be understood according to its plain and ordinary meaning, or in the alternative, "cover or lid." (ECF No. 62 at 16.) WCM asserts that the patents do not require an "unbroken ring on its interior for direct attachment

to the lug." (Id.; see also ECF No. 81 at 20 (arguing that the patent "does not depict an 'unbroken raised ring.'").) Further, WCM contends that "[t]here are too many differing uses of the term cap for it to be prescribed a limited meaning." (ECF No. 62 at 16.) WCM argues that "IPS has pointed to a very specific embodiment disclosed in the '584 patent and attempted to offer a construction that is limited to that one embodiment." (ECF No. 79 at 10.) "In the over 10,000 pages of intrinsic record among the five asserted utility patents, the best IPS can argue is that the 'unbroken raised ring' may be inferred from a single sectional view – one that does not even appear in the '220 patent." (ECF No. 81 at 20.)

IPS argues that "[d]espite the myriad devices that can be described by the term 'cap,' the claims, specifications, drawings, and file histories of the asserted patents disclose a very specific covering device that is designed to interact with a series of lugs that extend radially from a nut." (ECF No. 63 at 18.) IPS asserts that the only type of cap disclosed by the Asserted Patents is one with "a raised ring on the inner surface of the cap" as part of a snap-fit attachment mechanism. (Id. at 19.) IPS further contends that although there are multiple caps used in the Asserted Patents, only the cap with a raised ring is claimed. (Id. at 18.) Additionally, IPS argues the raised ring

is essential to the invention because without the ring the cap could not "spin freely around the nut without detaching." (ECF No. 80 at 23.)

The Court agrees in part with WCM. The claim language and specifications do not require "a raised ring on the inner surface of the cap" or a "snap-fit" connection between the lugs and cap. See supra Part III.C.8. None of the asserted claims express a "snapped" engagement. Id. Although the abstracts of two of the Asserted Patents describe a "frictionally snapped" connection, the specification language imposes no such limitation. Id. The prosecution history is similarly unresponsive to IPS's proposal to include an unbroken ring in the construction of "cap." See id. Similar to IPS's construction of the terms "detachably interconnected," "detachably associated," and "detachably engage," IPS incorrectly relies on a single embodiment of the invention. See id. Accordingly, the Court concludes that, similar to the construction of the connection terms, insufficient evidence exists to support IPS's narrow construction of "cap."

The Court finds that frictional engagement applies equally to the term "cap," as it does to the term "lug." See supra Part III.C.5. This conclusion is based on the same reasoning that led to the constructions of the terms "detachably

interconnected," "detachably associated," "detachably engage," and "lug." See supra Parts III.C.5, 8. In short, the frictional engagement is integral to the claimed invention because it is one of the elements that "provides an easier method to install a drain assembly that can be accomplished by a single individual." (See '220 patent, col. 1, ll. 58-60, ECF No. 75-1 at PageID 2164.)

This conclusion is supported by the prosecution history of the '970 and '584 patents. In a Request for Continued Examination dated August 29, 2005, WCM addressed the PTO's rejection of WCM's claims based on obviousness. (ECF No. 63-20 at 5-6.) WCM explained the advantage of frictional engagement:

This is advantageous as the cap may frictionally spin about the lugs independently of the nut such that if one grasped and turned the cap, the nut would not be loosened. Also, by being frictionally detachably engaged, the cap is easily positioned so that the notch is at a six o'clock position.

(Id. at 6.)

IPS's proposal to include "decorative cover" in the construction also has merit. The claims do not indicate a function for the cap other than to cover the overflow port. Nor is there a particular embodiment that specifically describes the cap as "decorative." The Federal Circuit has previously explained the significance of the language used in the Summary of the Invention section:

Although a statement's location is not "determinative," the location can signal the likelihood that the statement will support a limiting definition of a claim term. Statements that describe the invention as a whole, rather than statements that describe only preferred embodiments, are more likely to support a limiting definition of a claim term. See Digital Biometrics, Inc. v. Identix, Inc., 149 F.3d 1335, 1347 (Fed. Cir. 1998) (relying on "global comments made to distinguish the applicants' 'claimed invention' from the prior art" during the prosecution of the patent in construing a claim term). Statements that describe the invention as a whole are more likely to be found in certain sections of the specification, such as the Summary of the Invention. See Microsoft Corp. v. Multi-Tech Sys., Inc., 357 F.3d 1340, 1348 (Fed. Cir. 2004).

C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 864 (Fed. Cir. 2004) (limiting the construction of a claim based on language in the Summary of the Invention of the asserted patent). In the Summary of the Invention of the '132 patent, WCM describes the cap frictionally engaged with the nut as a "decorative cap." ('132 patent, col. 3, l. 53, ECF No. 75-3 at PageID 2206.) This characterization of the cap is confirmed in the Abstract. (Id. at 3.) A similar characterization of the cap is made in the '584, '970, and '272 patents. ('584 patent at 1, col. 1, l. 31, col. 2, l. 21, ECF No. 75-2 at PageID 2181; '970 patent, col. 2, l. 54, ECF No. 75-8 at PageID 2285; '272 patent, col. 2, ll. 55-56, ECF No. 75-4 at PageID 2239.) The specifications of the Asserted Patents also discuss a "decorative plate" existing in the art at the time of invention and serving the same or similar purpose of the cap, which is to

cover the overflow outlet. ('220 patent, col. 1, ll. 31, 50, ECF No. 75-1 at PageID 2164; '132 patent, col. 1, l. 62, col. 2, ll. 48, 67, ECF No. 75-3 at PageID 2205). Furthermore, this language was used in the original '724 Application in describing the state of the art and claimed invention. (ECF No. 62-2 at PageID 1043, 1045, 1051.)

Accordingly, the Court construes the term "cap" as "decorative cover frictionally engaged with the nut element." The Court's construction does not mean that the cap is totally devoid of functionality. As WCM's expert points out, a cap may "prevent[] foreign materials from falling down inside the overflow drain, so it's not just an esthetic. . . ." (ECF No. 63-12 at 88, ll. 9-10.) The Court does not believe this construction necessarily excludes caps that obstruct foreign materials from entering the overflow drain. Rather, whether a particular cap is decorative is to be determined by the trier of fact. See Acumed, 483 F.3d at 806.

10. "Overflow plate"

WCM argues that the term "overflow plate" should be afforded its plain and ordinary meaning. (ECF No. 62 at 17.) WCM provides no further argument in its supplemental or responsive briefs. (See generally ECF Nos. 79, 81.)

IPS proposes a construction of "[d]iaphragm having a rim and an inwardly extending lip about a portion of the circumference of the diaphragm that is intended to slide vertically into position between the surface of the tub and the retainer nut, or to slide vertically into a channel about the circumference of the retainer nut." (ECF No. 63 at 20.) IPS argues that although "overflow plate" does not necessarily have a specialized meaning, it occasionally is used in the plumbing industry to "describe a structure that covers the overflow port." (ECF No. 63 at 20.) IPS asserts that the specification of the '584 patent for a description "is the sole discussion" of the overflow plate. (Id. at 20.) The '584 patent specification describes the overflow plate as "an alternate embodiment of the invention" where the overflow plate "has a first section, which comprises a rim and a lip extending inwardly therefrom, and a second section, which does not comprise a rim or a lip, thereby forming a recessed portion." ('584 patent, col. 5, ll. 14-18, ECF No. 75-2 at PageID 2183.)

The Court agrees in part with WCM. Dependent claims 6 and 7 of the '584 patent are the only claims to express an overflow plate in connection with the overflow assembly. (Id. col. 6, ll. 54-57.) Claim 7 is dependent on claim 6 and describes a nut "that includes a notch that receives a lip of said overflow

plate.” (Id. col. 6, ll. 56-57.) Under the doctrine of claim differentiation, a proper construction of claim 6 will be broader than the subject matter claimed in claim 7. Phillips, 415 F.3d at 1314-15 (“[T]he the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.”). Therefore, properly construed, the overflow plate is not limited to a connection with the nut via “a notch that receives” the lip of the overflow plate. Accordingly, the Court finds a construction that includes a lip that “slide[s] vertically into a channel about the circumference of the retainer nut,” is impermissibly narrow.

IPS’s proposal to limit the overflow plate to using a diaphragm similarly lacks support in the intrinsic evidence. Neither the claims nor the specification use the term “diaphragm” in describing the overflow plate. Claim 6 does not limit the sealing portion of the overflow plate in any fashion. (See ‘584 patent, col. 6, ll. 54-55, .) The specification similarly leaves the sealing portion open to a variety of structures in describing the sealing portion as a “second section, which does not comprise a rim or lip. . . .” (Id. col. 5, ll. 16-17.) Accordingly, the Court rejects this limitation.

Other portions of IPS's construction are also too narrow and attempt to limit claim scope based on a single embodiment of the invention. See Phillips, 415 F.3d at 1323. The language "having a rim and an inwardly extending lip" closely follows the description of the embodiment disclosed in the specification. The specification is clear that the structure described is an "alternate embodiment." ('584 patent, col. 5, ll. 11-12. ECF No. 75-2 at PageID 2183.) IPS fails to cite to any extrinsic evidence to support a construction based on a single embodiment in the specification, and the Court can find none. Accordingly, the Court declines to read the structure described in the specification as a limitation on the claim term.

The Court, however, finds that a construction based on the plain and ordinary meaning is also insufficient in this case. The language of claim 6 expresses a clear limitation that the overflow plate "is selectively interconnected to said nut." (Id. col. 6, ll. 54-55.) Selective engagement with the nut is confirmed in the specification which discloses a modified overflow plate as "engag[ing] a notched surface 124 on at least a portion of the retainer nut 114. . . ." (Id. col. 5, ll. 18-20.) Accordingly the Court construes the term "overflow plate" as "a sealing plate that selectively engages the retainer nut."

11. "Waste water insert"

WCM argues that the term "waste water insert" should be understood according to its plain and ordinary meaning, or in the alternative, WCM proposes "insert for a waste water assembly." (ECF No. 62 at 21.) By way of example, WCM asserts that the '970 patent also describes the waste water insert as simply "a 'cover' for the waste water drain assembly." (ECF No. 79 at 20.) WCM further asserts that the plain and ordinary meaning of the term is "a protective cover for the waste water assembly." (ECF No. 81 at 21.) WCM supports this argument with Reference Numeral 200 in the '970 patent, which is described as a cover and "may also be viewed as a waste water insert." (ECF No. 79 at 20 (quoting '970 patent, col. 8, ll. 53-54).) WCM contends that nothing in the '970 patent suggests that WCM intended to limit "waste water insert" to a specific embodiment. (Id. at 21; accord ECF No. 81 at 21-22.)

IPS asserts the proper construction of the term "waste water insert" is "a protective drain cover with an opening, a flange, and a tubular wall extending downward from the flange with a groove around the outer circumference of the tubular wall that is adapted to receive a seal for connection to the strainer" based primarily on "the claims, specification, drawings, and file history of the '970 patent." (ECF No. 63 at

22.) IPS further argues that "WCM's proposed construction for the claim term "waste water insert" is so broad that literally any object that is physically placed in the drain assembly would satisfy this limitation." (ECF No. 80 at 22.) IPS supports this conclusion with evidence in the prosecution history of the '970 patent. (Id.) IPS asserts that WCM modified the insert to include a multi-portioned wall to avoid rejection. (Id.)

The Court agrees in part with IPS. As stated by the Federal Circuit, "[a] determination that a claim term 'needs no construction' or has the 'plain and ordinary meaning' may be inadequate . . . when reliance on a term's 'ordinary' meaning does not resolve the parties' dispute." O2 Micro Int'l Ltd., 521 F.3d at 1361. The Court concludes that the plain and ordinary meaning of "waste water insert" fails to resolve the parties' dispute.

Of the Asserted Patents, only the claims in the '970 and '272 patents use the term "waste water insert"; the claims in the '220, '584, and '132 patents do not. The '970 patent claims, in relevant part, "a waste water insert for selective engagement with a strainer that is associated with the wastewater drain assembly." ('970 patent, col. 9, ll. 50-52, ECF No. 75-8 at PageID 2289.) The '272 patent similarly claims:

a waste water insert adapted for insertion within the wastewater strainer and comprising a wall with a

cylindrical portion having an upper end with a flange extending outwardly from said cylindrical portion, said flange having a downwardly-extending lip associated with the outer edge thereof, said lip adapted to engage an outer edge of the flange of the wastewater strainer, and wherein.

('272 patent, col. 11, ll. 23-30, ECF No. 75-4 at PageID 2244.)

As seen here, the independent claims do not contemplate "a groove . . . that is adapted to receive a seal for connection to the strainer" as IPS suggests. While dependent claim 5 of the '970 patent contemplates a "waste water insert [having] a groove that receives a resilient ring," under the doctrine of claim differentiation, this limitation cannot be applied to the independent claim. ('970 patent, col. 10, ll. 10-11, ECF No. 75-8 at PageID 2289.) The independent claims do, however, contemplate a flange, a cylindrical wall, and selective engagement with the strainer. (Id. col. 9, ll. 50-52; '272 patent, col. 11, ll. 25-30, ECF No. 75-4 at PageID 2244.)

Aside from the claims, the specifications for the '970 patent and for the '272 patent both broadly contemplate a "protective drain cover" and use the terms "protective cover" and "drain cover" interchangeably. (See '970 patent, col. 8, ll. 33-52, ECF No. 75-8 at PageID 2288; '272 patent, col. 8, ll. 33-52, ECF No. 75-4 at PageID 2242.) The specifications further indicate that the "protective drain cover" may also be viewed as a "waste water insert" and refer to U.S. Patent No. 7,503,083

("083 patent"), titled "Means for Covering the Flange of a Waste Water Strainer."² As such, the "waste water insert" is alternatively described as simply an "insert." (See '970 patent, col. 8, l. 5 - col. 9, l. 23, ECF No. 75-8 at PageID 2288-89; '272 patent, col. 8, l. 5 - col. 9, l. 23, ECF No. 75-4 at PageID 2242-43.)

Although the claims do not specifically express the existence of an opening in the insert, such an opening is contemplated in the specifications of the '970 and '272 patents. The specifications disclose the protective cover "having an opening 204 therethrough," and the insert's "downwardly extending wall" as "surround[ing] a center opening. . . ." ('970 patent, col. 8, ll. 34-35, 60-61, ECF No. 75-8 at PageID 2288; '272 patent, col. 8, ll. 34-35, 60-61, ECF No. 75-4 at PageID 2242.)

Regarding the cylindrical wall, claim 13 of the '272 Patent describes both the insert and the strainer as having a "cylindrical wall," not a tubular wall. ('272 patent, col. 10, l. 66 - col. 11, ll. 4, col. 11, ll. 24-26, ECF No. 75-4 at PageID 2243-44.) The '970 patent claims are silent on whether the waste water insert wall is cylindrical or some other form.

² The Court takes notice that the claims of the '083 patent are specifically construed in the related case, IPS Corporation v. WCM Industries, No. 2:12-cv-02694-JPM-tmp (W.D. Tenn.).

('970 patent, col. 9, ll. 50-52, ECF No. 75-8 at PageID 2289.) The '970 patent specification, however, describes waste water insert wall as "extending downwardly." (Id. col. 8, l. 60, col. 9, l. 6.) In one embodiment, the wall has a conical section between the two cylindrical sections. This embodiment exists in both the '970 and '272 patents. (Id. col. 8., 66 - col. 9, ll. 1; '272 patent, col. col. 8., 66 - col. 9, ll. 1, ECF No. 75-4 at PageID 2242-43.) Further, in describing a protective cover, the specifications for both patents refer several times to the cover's tubular wall. ('970 patent, col. 8, ll. 36, 45, 48, ECF No. 75-8 at PageID 2288; '272 patent, col. 8, ll. 36, 45, 48, ECF No. 75-4 at PageID 2242.) Therefore, the Court finds that including "cylindrical" as a limitation on the wall would result in an overly narrow construction of the claims.

Accordingly, the Court construes "waste water insert" to mean "protective drain cover in selective engagement with the strainer having an opening, a flange, and a tubular wall."

12. "Strainer"

WCM argues that the term should be given its plain and ordinary meaning, as the term "does not always prevent objects of a selected size from passing through the drain." (ECF No. 62 at 22.) WCM asserts that the '220 and '970 patents "only include[] two crossbars for supporting a stopper." (Id.; accord

ECF No. 79 at 22.) WCM contends that "IPS's proposed construction would render other terms appearing in this phrase superfluous and thus nonsensical." (ECF No. 81 at 22.)

According to IPS, the term "strainer" has a specialized meaning in the field of plumbing as "a portion of the drain assembly that prevents objects of a selected size from passing through the drain assembly." (ECF. No. 63 at 22 (internal quotation marks omitted).) This argument is supported by expert Paschal's expert report. (ECF. No. 63-9 at 38.)

The Court agrees with WCM. IPS's construction finds little support in the '970 patent and '272 patent specifications. Those specifications disclose a strainer with only two crossbars. ('970 patent fig. 10, ECF No. 75-8 at PageID 2271; '272 patent fig. 10, ECF No. 75-4 at PageID 2225.) Moreover, the thrust of the invention regarding the strainer is to "eliminate[]the need for the removal of a strainer body often associated with drain assemblies." ('970 patent, col. 3, ll. 3-5, ECF No. 75-8 at PageID 2286; '270 patent, col. 3, ll. 3-5, ECF No. 75-4 at PageID 2240.) Whether the strainer is designed to obstruct particles of a certain size is largely irrelevant. (See Response to Office Action for Application 09/954, 420, June 16, 2003, at 4, 6, P05266US0.)

Paschal offers limited evidence to support his conclusion that "[t]he claims, specifications, drawings, and file histories of the asserted patents support [his] opinion that this term refers to 'a portion of the drain assembly that prevents objects of a selected size from passing through the drain assembly.'" (Id.) Although the prior art cited in the prosecution history discusses certain "strainer device[s]" that "remov[e] hair or other particles from drain pipes," evidence that the strainer must prevent objects of select size from passing through the drain assembly is absent. (Response to Office Action for Application 09/954, 420, June 16, 2003, at 4, 6, P05266US0.) WCM's arguments center on the need to improve the method of installation, and in particular, the upper end and annular flange of the drain pipe. (Id.; Office Action for Application 09/954,420, July 16, 2003 at 9.) Further, IPS has not submitted any literature in support of its construction.

Accordingly, the Court construes the term "strainer" as its plain and ordinary meaning.

13. "A wastewater drain assembly adapted for interconnection to the drain port and to the lower end portion of said overflow pipe"

WCM argues that the term should mean "an assembly capable of being connected with a drain port and a lower end portion of an overflow pipe." (ECF No. 62 at 21-22.) WCM contends that

IPS's construction "would render other terms appearing with this particular claim term superfluous." (Id. at 22.) WCM asserts that "[t]he plain words used in this phrase are clear, are not overbroad or inconsistent, and are true to the written description." (ECF No. 79 at 21.) WCM further maintains that "IPS's construction should be rejected as redundant and as violating the doctrine of claim differentiation." (ECF No. 81 at 22.)

IPS asserts that "[t]he claims, specification, drawings, and file history of the '970 patent disclose that this term refers to a strainer and drain closure that is secured to the drain port by tightening a nut against the drain pipe flange below the tub floor." (ECF No. 63 at 23 (internal quotation marks omitted).) In support of this argument, IPS quotes from the specification of the '970 patent to the effect that a nut is used to "sandwich" the tub floor "between the drain pipe flange and the nut to secure the drain assembly. . . ." ('970 patent, col. 6, l. 64 - col. 7, l. 16, ECF No. 75-8 at PageID 2287.)

The Court agrees in part with WCM. Claim 6 of the '970 patent discloses a wastewater drain assembly as follows:

a wastewater drain assembly adapted for interconnection to the drain port and to the lower end portion of said overflow pipe, said drain assembly including a drain pipe having an upper end with an annular flange for resting on a bottom wall of the bathtub, and a means for locking slidably received

by, and threadingly engaged, to said drain pipe, wherein tightening said means for locking against an outer surface of the bottom wall of the bathtub secures said wastewater drain assembly to the bathtub.

(Id. col. 10, ll. 34-36.) A plain reading of the claim reveals that the primary requirements are that the wastewater drain assembly connects to the drain port and lower end portion of an overflow pipe. Additionally, the claims of the '970 patent make clear that the nut is not "against the drain pipe flange below the tub floor," as IPS proposes. Rather, claim 6 describes the flange as "resting on the bottom wall of the bathtub," and the means for locking the assembly is tightened "against an outer surface of the bottom wall of the bathtub." (Id. col. 10, ll. 37-38, 41.)

The specification language quoted by IPS is similarly unavailing. In the same paragraph cited by IPS, the specification states that the described structure is only one embodiment of the invention. (Id. col. 6, 65-66.) Therefore, the Court rejects IPS's narrow construction. Accordingly, the Court construes the term "a wastewater drain assembly adapted for interconnection to the drain port and to the lower end portion of said overflow pipe" as "an assembly capable of being connected with a drain port and a lower end portion of an overflow pipe."

14. "Means for locking slidingly received by, and threadingly engaged, to said drain pipe"

The first step of the means-plus-function analysis requires the Court to "determine if the claim limitation is drafted in means-plus-function format." By employing the term "means," the claim limitation "means for locking slidingly received by, and threadingly engaged, to said drain pipe" creates a rebuttable presumption that the drafter intended the claim to be governed by 35 U.S.C. § 112(f). See Flo Healthcare Solutions, 697 F.3d at 1373. The parties do not dispute that this limitation invokes § 112(f). (See ECF No. 63 at 24; ECF No. 81 at 24.) Accordingly, the Court finds that the limitation "means for locking slidingly received by, and threadingly engaged, to said drain pipe" is a means-plus-function limitation.

Once the Court has determined means-plus-function applies, the Court then identifies the function of the limitation and the corresponding structure in the specification. Biomedino, 490 F.3d at 950.

WCM argues that the claim limitation should mean "locking by sliding together while engaging threads located on the drain pipe." (ECF No. 62 at 23.) WCM asserts that the "claim term is best construed as a locking function, which is achieved while sliding the drain pipe through the drain port and using a threaded engagement to lock the lock nut to the drain pipe."

(Id. (citing Ex. 9, ECF No. 62-10 at 4-5); ECF No. 79 at 23 (citing Ex. 14, ECF No. 79-15 at 7-8).) To support this assertion, WCM points to several embodiments of the invention. "In one embodiment, the cylindrical fitting includes exterior threads [that] receive a nut." (ECF No. 62-10 at 4.) Another embodiment includes "a lock washer [that] is threadingly engaged to the inner end of the drain pipe to the threaded portion." (Id. at 5.) Finally, WCM points to the same structure upon which IPS relies in its construction.

IPS argues that only a single structure disclosed in the '970 patent "corresponds with this claim term: a drain pipe flange and a nut, such that the tub floor is sandwiched between the drain pipe flange and the nut to secure the drain assembly to the drain port of the bathtub." (Id.)

Neither parties' construction is sufficient. The phrase "means for locking slidably received by, and threadingly engaged, to said drain pipe" is found in Claim 6 of the '970 patent. Claim 6 describes:

a wastewater drain assembly adapted for interconnection to the drain port and to the lower end portion of said overflow pipe, said drain assembly including a drain pipe having an upper end with an annular flange for resting on a bottom wall of the bathtub, and a means for locking slidably received by, and threadingly engaged, to said drain pipe, wherein tightening said means for locking against an outer surface of the bottom wall of the bathtub secures said wastewater drain assembly to the bathtub.

('970 patent, col. 10, ll. 34-42, ECF No. 75-8 at PageID 2289.)

Based on the above claim language, the Court finds that the function of this limitation is to secure the upper end of the drain pipe to the bottom bathtub wall.

The Court finds that the specification of the '970 patent discloses multiple structures corresponding to this limitation. In one embodiment, "the tub floor 114 is sandwiched between a drain pipe flange 118 and a nut 122." (Id. col. 7, ll. 2-4.) In that embodiment, "[t]he drain pipe flange 118 is mated with a drain pipe 134 wherein the nut 122 is threaded on the drain pipe 134 prior to the marriage of the cylindrical portion 126 and the drain pipe 134." (Id. col. 7, ll. 6-9.) Thus, the primary means for securing the drain assembly to the tub is a nut.

The Summary of the Invention discloses another structure corresponding to the limitation. There, the specification describes, "an L-shaped drain pipe having a threaded upper end and an annular flange covered by a membrane, through a drain port of the bathtub, such that the annular flange rests on a bottom surface of the bathtub." (Id. col. 3, ll. 6-9.) This assembly is secured to the bathtub wall by "a lock washer [that] is threadingly engaged to the inner end of the drain pipe." (Id. col. 3, ll. 10-11 (emphasis added).)

WCM suggests that the cylindrical fitting with exterior threads that receive a nut disclosed in the Summary of the Invention is another embodiment of the limitation. Claim 6 makes clear that the limitation "means for locking slidingly received by, and threadingly engaged, to said drain pipe" applies to securing the wastewater drain assembly, not the overflow assembly. (See id. col. 10, ll. 34-42.) Thus, the Court rejects WCM's assertion because the cylindrical fitting is part of an embodiment of the overflow assembly. (See id. col. 6, ll. 1-18, col. 8, ll. 5-13.)

Accordingly, the Court construes the limitation "means for locking slidingly received by, and threadingly engaged, to said drain pipe" to include the two embodiments disclosed in the '970 patent specification and their equivalents. Specifically, the Court interprets the corresponding structure to include "a drain pipe flange and a nut, such that the bathtub floor is sandwiched between the drain pipe flange and the nut to secure the drain assembly to the drain port of the bathtub." The corresponding structure further includes "a drain pipe flange and a lock washer, such that the drain pipe flange rests on the bathtub floor and the lock washer threadingly engages the inner end of the drain pipe to secure the drain assembly to the drain port of the bathtub."

D. Design Patents

"Whether a design patent is infringed is determined by first construing the claim to the design, when appropriate, and then comparing it to the design of the accused device." Oddzon Prods., Inc. v. Just Toys, Inc., 122 F.3d 1396, 1404 (Fed. Cir. 1997). "A design patent only protects the novel, ornamental features of the patented design." Id. at 1405. "Where a design contains both functional and non-functional elements, the scope of the claim must be construed in order to identify the non-functional aspects of the design as shown in the patent." Id. "[T]he preferable course ordinarily will be for a district court not to attempt to 'construe' a design patent claim by providing a detailed verbal description of the claimed design." Egyptian Goddess, Inc. v. Swisa, Inc., 543 F.3d 665, 679 (Fed. Cir. 2008). "Thus, the general rule that now governs design claim construction is that 'the illustration in the drawing . . . is its own best description.'" Rapha Prods. Group, LLC v. Skullcandy, Inc., No. 1:10-cv-3388-JEC, 2012 U.S. Dist. LEXIS 188837, at *7 (N.D. Ga. Aug. 13, 2012) (quoting Croes, Inc. v. Int'l Trade Comm'n, 598 F.3d 1294, 1303 (Fed. Cir. 2010)).

Nonetheless, "the scope of [a] claim must be construed in order to identify the non-functional aspects of the design as shown in the patent." Richardson v. Stanley Works, Inc., 597

F.3d 1288, 1293 (Fed. Cir. 2010). "If the patented design is primarily functional rather than ornamental, the patent is invalid. However, when the design also contains ornamental aspects, it is entitled to a design patent whose scope is limited to those aspects alone and does not extend to any functional elements of the claimed article." Richardson, 597 F.3d at 1293-94.

WCM asserts that proper construction of the asserted design patents are as follows:

1. For U.S. Design Patent No. D636, 468, the proper construction should be "the ornamental design for a flexible bathtub waste pipe assembly, as shown and described in Figures 1-4";
2. For U.S. Design Patent No. D627,863, the proper construction should be "the ornamental design for a bathtub overflow pipe, as shown and described in Figures 1-6"; and
3. For U.S. Design Patent No. D665,062, the proper construction should be "the ornamental design for a bathtub overflow pipe, as shown and described in Figures 1-6".

(ECF No. 62 at 25.)

IPS urges the Court to find that the construction of the design patents is unnecessary because "there are no identifiable ornamental aspects of the '863, '062, and '468 patents." (ECF No. 63 at 25.) IPS asserts that "all of the discernible elements of each of the asserted design patents are dictated primarily by the function of that respective element." (Id.) IPS further points to the fact that the ornamental aspects of the designs would not be seen during normal use after installation. (Id.)

The Court agrees with IPS. The design patents here are analogous to the design patents covering the multi-function tool claimed in Richardson in that several aspects of the claimed designs are "driven purely by utility." 597 F.3d at 1294 (affirming the district court's construction that the asserted patent did not cover several elements of the design because they were dictated by functional purpose). In these design patents, the overall shape and dimensions of the overflow pipe and bathtub waste pipe, as well as the threading of the pipes' interfaces are all dictated primarily by function, not ornamentation. Claim 1 of the '220 utility patent describes the overflow pipe as having "an elbow portion defining an upper end portion and a lower end portion, said upper end portion having an outer end defining an inlet and having threads on an outer

surface thereof. . . ." ('220 patent, col. 6, ll. 15-18, ECF No. 75-1 at PageID 2166.) Claim 1 further describes the overflow pipe as having "a lip extending radially outwardly from said outer surface of the overflow pipe between said elbow portion and said upper end portion and being spaced from the inlet." (Id. col. 6, ll. 19-21.) Further, the threads of the overflow pipe are designed for the function of engagement with a nut or nut element. (See id. col. 6, ll. 58-60.)

The specifications of the Asserted Patents describe the function of the waste pipe assembly. The '970 patent discloses "in accordance with these and other aspects, one method includes inserting an L-shaped drain pipe having a threaded upper end and an annular flange covered by a membrane." ('970 patent, col. 3, ll. 5-8, ECF No. 75-8 at PageID 2286.) The '220 patent similarly discloses "inserting a generally L-shaped drain pipe 16A through a drain hole 18A on the bottom wall 26 of the bathtub 20." ('220 patent, col. 4, ll. 12-14, ECF No. 75-1 at PageID 2166.)

In evaluating the asserted design patents, it is unclear to the Court what, if any, aspects of the designs are dictated by ornamental considerations. Although WCM proposes certain claim constructions, WCM provides little explanation as to which specific aspects of the designs are ornamental. Therefore, the

Court concludes that the designs for the overflow pipe and bathtub waste pipe are dictated by functional considerations. Accordingly, the Court concludes those designs are not protected by the asserted design patents.

IV. CONCLUSION

For the foregoing reasons, the Court construes the following terms:

CLAIM TERM	COURT'S CONSTRUCTION
Sealing element/ element associated with said outer end	"a seal having a surface around and in secure engagement with an inlet, and lacking an o-ring or annular seal set in a groove of the inner surface of the cap"

CLAIM TERM	COURT'S CONSTRUCTION
Means for preventing fluid flow/Mean for Sealing	<p>The Court's construction is based on the corresponding structure disclosed in the Asserted Patents and equivalents thereof:</p> <p>The '220 patent: "a thin circular diaphragm that is integrally formed with or hermetically sealed to the outer end of the overflow pipe."</p> <p>The '132 patent: (i) the corresponding structure in the '220 patent; (ii) "a thin circular plate disk of plastic material that forms one unitary component with the overflow (iii) "a thin circular plate disk fused, hermetically sealed or otherwise rigidly attached to the overflow pipe fitting;" (iv) "an overflow plate that slides vertically into position between the surface of the tub and the retainer nut, and has a rim and a lip that engages a notched surface on the retainer nut;" (v) the overflow plate described in (iv) except that the "notched surface is nearly concentric about the thickness of the retainer nut such that the lip engages both sides of the retainer illustrated in Figure 13;" and (vi) "a removable seal that is inserted into a slot formed in either the retainer nut or threaded portion of the overflow assembly."</p> <p>The '970 patent: (i) the corresponding structure in the '220 patent; (ii) "a test cap with a cylindrical body, a flange having a face that receives a diaphragm, and internal threads that receive the overflow pipe fitting;" (iii) "a test cap with an inner surface made of malleable material;" and (iv) "a plug with a diaphragm on one end."</p> <p>The '272 patent: incorporate by</p>

CLAIM TERM	COURT'S CONSTRUCTION
	reference all corresponding structure found in the '970 patent, excluding the structure found in the '220 patent.
Associated with said outer end	Plain and ordinary meaning
Nut/Nut Element	"an object having at least one radially extending lug and a threaded bore to selectively engage the upper end of the overflow assembly"
Threaded portion	Plain and ordinary meaning
Lug	"a lug that detachably engages with the cap" consistent with the Court's construction of the term "detachably engages"
Plurality of lugs extending radially	Plain and ordinary meaning
Series of radially extending lugs	Plain and ordinary meaning
Series of retention lugs	Plain and ordinary meaning
At least one lug extending radially	Plain and ordinary meaning
Cap retention elements	"lugs on the nut element for retaining a cap" consistent with the Court's construction of the term "lugs"
Series of radially extending cap retention elements	Plain and ordinary meaning consistent with the Court's construction of the term "cap retention elements"
Spaced about a longitudinal axis defined by said nut element	Plain and ordinary meaning
Detachably interconnected	"detachably frictionally engaged"
Detachably associated	"detachably frictionally engaged"
Detachably engage	"detachably frictionally engaged"
Selectively interconnected to said nut	"selectively frictionally engaged to said nut"
Cap	"decorative cover frictionally engaged with the nut element"
Overflow plate	"a sealing plate that selectively engages the retainer nut"

CLAIM TERM	COURT'S CONSTRUCTION
Waste water insert	"protective drain cover in selective engagement with the strainer having an opening, a flange, and a tubular wall"
Strainer	Plain and ordinary meaning
A wastewater drain assembly adapted for interconnection to the drain port and to the lower end portion of said overflow pipe	"an assembly capable of being connected with a drain port and a lower end portion of an overflow pipe"
"Means for locking slidably received by, and threadably engaged, to said drain pipe"	<p>The Court's construction is based on the corresponding structure disclosed in the '970 patent and equivalents thereof:</p> <p>(i) "a drain pipe flange and a nut, such that the bathtub floor is sandwiched between the drain pipe flange and the nut to secure the drain assembly to the drain port of the bathtub;" and (ii) "a drain pipe flange and a lock washer, such that the drain pipe flange rests on the bathtub floor and the lock washer threadably engages the inner end of the drain pipe to secure the drain assembly to the drain port of the bathtub."</p>
Design Patent No. D627,863	Not protected because functional considerations dictate the design
Design Patent No. D636,468	Not protected because functional considerations dictate the design
Design Patent No. D665,062	Not protected because functional considerations dictate the design

IT IS SO ORDERED, this 10th day of November, 2014.

/s/ Jon P. McCalla
 JON P. MCCALLA
 UNITED STATES DISTRICT JUDGE

APPENDIX A

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
Sealing element/ element associated with said outer end	"a seal having a surface around and in secure engagement with an inlet"	Means-plus-function claims used interchangeably with "Means for preventing fluid flow" and "Means for Sealing." Construe based on structure disclosed in the specifications of the patents. See next claim term for the proposed constructions of the '220, '132, '970, and '272 patents. The '584 patent: (i) a thin diaphragm that is integrally formed with the overflow assembly or that is permanently sealed to the overflow assembly that is removed by cutting or breaking; (ii) a thin diaphragm that slides vertically into position between the surface of the tub and the retainer nut, or slides vertically into a channel formed about the periphery of the retainer nut; and	"a seal having a surface around and in secure engagement with an inlet, and lacking an o-ring or annular seal set in a groove of the inner surface of the cap"

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
		(iii) a thin diaphragm that is inserted into a slot formed in the threaded portion of the overflow assembly or that is inserted in a slot that is formed in the retainer nut.	

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
Means for preventing fluid flow/Mean for Sealing	"a thin-walled apparatus that may be placed in a manner to seal the inlet"	<p>Means-plus-function claims - terms used interchangeably/same meaning:</p> <p>The '220 patent: a thin diaphragm that is integrally formed with the overflow assembly or that is permanently sealed to the overflow assembly that is removed by cutting or breaking.</p> <p>The '132 patent: a thin diaphragm that is integrally formed with the overflow assembly or that is permanently sealed to the overflow assembly that is removed by cutting or breaking; a thin diaphragm that slides vertically into position between the surface of the tub and the retainer nut, or slides vertically into a channel formed about the periphery of the retainer nut; a thin diaphragm that is inserted into a slot</p> <p>127</p>	<p>The Court's construction is based on the corresponding structure disclosed in the Asserted Patents and equivalents thereof:</p> <p>The '220 patent: "a thin circular diaphragm that is integrally formed with or hermetically sealed to the outer end of the overflow pipe."</p> <p>The '132 patent: (i) the corresponding structure in the '220 patent; (ii) "a thin circular plate disk of plastic material that forms one unitary component with the overflow pipe fitting;"</p>

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
Means for preventing fluid flow/Mean for sealing		<p>formed in the threaded portion of the overflow assembly or that is inserted in a slot that is formed in the retainer nut.</p> <p>128</p>	<p>(iii) "a thin circular plate disk fused, hermetically sealed or otherwise rigidly attached to the overflow pipe fitting;" (iv) "an overflow plate that slides vertically into position between the surface of the tub and the retainer nut, and has a rim and a lip that engages a notched surface on the retainer nut;" (v) the overflow plate described in (iv) except that the "notched surface is nearly concentric about the thickness of the retainer nut such that the lip engages both sides of the retainer nut surrounding the notched surface as</p>

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
		<p>The '970 patent: (i) a thin diaphragm that is integrally formed with the overflow assembly or that is permanently sealed to the overflow assembly that is removed by cutting or breaking; (ii) a test cap with internal threading that incorporates a thin diaphragm that is permanently sealed to the test cap and that is removed by cutting or breaking; (iii) a test cap with external threading that incorporates a thin diaphragm that is permanently sealed to the test cap and that is removed by cutting or breaking; (iv) a test cap with internal deformable/malleable threading that incorporates a thin diaphragm that is permanently sealed to the test cap and that is removed by cutting or breaking.</p>	<p>illustrated in Figure 13;" and (vi)"a removable seal that is inserted into a slot formed in either the retainer nut or threaded portion of the overflow assembly."</p> <p>The '970 patent:(i) the corresponding structure in the '220 patent; (ii) "a test cap with a cylindrical body, a flange having a face that receives a diaphragm, and internal threads that receive the overflow pipe fitting;" (iii) "a test cap with an inner surface made of malleable material;" and</p>

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
Means for preventing fluid flow/Mean for sealing		<p>The '272 patent: (i) a thin diaphragm that is integrally formed with the overflow assembly or that is permanently sealed to the overflow assembly that is removed by cutting or breaking; (ii) a test cap with internal threading that incorporates a thin diaphragm that is permanently sealed to the test cap and that is removed by cutting or breaking; (iii) a test cap with external threading that incorporates a thin diaphragm that is permanently sealed to the test cap and that is removed by cutting or breaking; a test cap with internal deformable/malleable threading that incorporates a thin diaphragm that is permanently sealed to the test cap and that is permanently sealed to the test cap and that is removed by cutting or breaking; (iv) a test cap with internal deformable/malleable threading that incorporates a</p>	<p>(iv) "a plug with a diaphragm on one end."</p> <p>The '272 patent: incorporate by reference all corresponding structure found in the '970 patent, excluding the structure found in the '220 patent.</p>

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
		thin diaphragm that is permanently sealed to the test cap and that is removed by cutting or breaking.	
Associated with said outer end	Plain and ordinary meaning	"integrally attached to form a single, inseparable piece of plastic such that removal of the sealing element is achieved by cutting or breaking"	Plain and ordinary meaning
Nut/Nut Element	"an object having a threaded bore to selectively engage an externally threaded object"	"device for affixing the overflow assembly to the bathtub wall having an internal, circular threaded surface, a nut body, and radially extending lugs"	"an object having at least one radially extending lug and a threaded bore to selectively engage the upper end of the overflow assembly"
Threaded portion	Plain and ordinary meaning	"inner portion of the nut element having threads"	Plain and ordinary meaning
Lug	Plain and ordinary meaning	"Deflectable retention hook that protrudes from the body of the nut element wherein the arc length between each protrusion is larger than or equal to the arc length of the protrusion itself"	"a lug that detachably engages with the cap" consistent with the Court's construction of the term "detachably engages"

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
Plurality of lugs extending radially	"multiple lugs extending outwardly from the central axis through the bore of the nut element"	Plain and ordinary meaning	Plain and ordinary meaning
Series of radially extending lugs	"multiple lugs extending outwardly from the central axis through the bore of the nut element"	Plain and ordinary meaning	Plain and ordinary meaning
Series of retention lugs	Plain and ordinary meaning	Plain and ordinary meaning	Plain and ordinary meaning
At least one lug extending radially	"at least one lug extending outwardly from the central axis through the bore of the nut element"	Plain and ordinary meaning	Plain and ordinary meaning
Cap retention elements	Plain and ordinary meaning consistent with proposed construction of "lugs on the nut/device for retaining a cap"	"the lugs as described and drawn in the specification of the '132 Patent and '272 Patent"	"lugs on the nut element for retaining a cap" consistent with the Court's construction of the term "lugs"

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
Series of radially extending cap retention elements	Plain and ordinary meaning	Plain and ordinary meaning	Plain and ordinary meaning consistent with the Court's construction of the term "cap retention elements"
Spaced about a longitudinal axis defined by said nut element	"spaced about a central axis through the bore of the nut element"	Plain and ordinary meaning	Plain and ordinary meaning
Detachably interconnected	Plain and ordinary meaning	"a snap-fit attachment between the deflectable lugs extending from the body of the nut element and a raised ring on the interior of the cap that permits removal by axial force"	"detachably frictionally engaged"
Detachably associated	"selectively engaged or disengaged"	"a snap-fit attachment between the deflectable lugs extending from the body of the nut element and a raised ring on the interior of the cap that permits removal by axial force"	"detachably frictionally engaged"

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
Detachably engage	"selectively engage or disengage"	"a snap-fit attachment between the deflectable lugs extending from the body of the nut element and a raised ring on the interior of the cap that permits removal by axial force"	"detachably frictionally engaged"
Selectively interconnected to said nut	Plain and ordinary meaning	"a snap-fit attachment between the deflectable lugs extending from the body of the nut element and a raised ring on the interior of the cap that permits removal by axial force"	"selectively frictionally engaged to said nut"
Cap	Plan and ordinary meaning; or "cover or lid"	"decorative cover for the overflow port that includes an unbroken ring on its interior for direct attachment to the lug"	"decorative cover frictionally engaged with the nut element"

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
Overflow plate	Plain and ordinary meaning	"diaphragm having a rim and an inwardly extending lip about a portion of the circumference of the diaphragm that is intended to slide vertically into position between the surface of the tub and the retainer nut, or to slide vertically into a channel about the circumference of the retainer nut"	"a sealing plate that selectively engages the retainer nut"
Waste water insert	Plain and ordinary meaning; or "insert for a waste water assembly"	"a protective drain cover with an opening, a flange, and a tubular wall extending downward from the flange with a groove around the outer circumference of the tubular wall that is adapted to receive a seal for connection to the strainer"	"protective drain cover in selective engagement with the strainer having an opening, a flange, and a tubular wall"
Strainer	Plain and ordinary meaning	"a portion of the drain assembly that prevents objects of a selected size from passing through the drain assembly"	Plain and ordinary meaning

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
A wastewater drain assembly adapted for interconnection to the drain port and to the lower end portion of said overflow pipe	"an assembly capable of being connected with a drain port and a lower end portion of an overflow pipe"	"a strainer and drain closure that is secured to the drain port by tightening a nut against the drain pipe flange below the tub floor"	"an assembly capable of being connected with a drain port and a lower end portion of an overflow pipe"

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
Means for locking slidingly received by, and threadingly engaged, to said drain pipe	"locking by sliding together while engaging threads located on the drain pipe"	"a drain pipe flange and a nut, such that the tub floor is sandwiched between the drain pipe flange and the nut to secure the drain assembly to the drain port of the bathtub"	<p>The Court's construction is based on the corresponding structure disclosed in the '970 patent and equivalents thereof:</p> <p>(i) "a drain pipe flange and a nut, such that the bathtub floor is sandwiched between the drain pipe flange and the nut to secure the drain assembly to the drain port of the bathtub;" and</p> <p>(ii) "a drain pipe flange and a lock washer, such that the drain pipe flange rests on the bathtub floor and the lock washer threadingly engages the inner end of the drain</p>

CLAIM TERM	WCM'S PROPOSED CONSTRUCTION	IPS'S PROPOSED CONSTRUCTION	COURT'S CONSTRUCTION
			pipe to secure the drain assembly to the drain port of the bathtub."
Design Patent No. D627,863	"the ornamental design for a bathtub overflow pipe, as shown and described in Figures 1-6"	Not protected because functional considerations dictate the design	Not protected because functional considerations dictate the design
Design Patent No. D636,468	"the ornamental design for a flexible bathtub waste pipe assembly, as shown and described in Figures 1-4"	Not protected because functional considerations dictate the design	Not protected because functional considerations dictate the design
Design Patent No. D665,062	"the ornamental design for a bathtub overflow pipe, as shown and described in Figures 1-6"	Not protected because functional considerations dictate the design	Not protected because functional considerations dictate the design